DOCUMENT RESUME

ED 138 325 95 JC 770 254

TITLE A Proposal for Surveying the Employers of 1975-76 Community College Graduates [and] Survey of Employers of 1975-76 Community College Graduates. Student Flow Project, Report No. 14 [and] 24.
INSTITUTION Hawaii Univ., Honolulu. Community Coll. System.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
PUB DATE Apr 77
NOTE 76p.

EDRS PRICE MF-$0.83 HC-$4.67 Plus Postage.
DESCRIPTORS Community Colleges; *Employer Attitudes; *Followup Studies; *Job Skills; *Junior Colleges; Literature Reviews; Program Effectiveness; Program Evaluation; Program Improvement; *Questionnaires; State Surveys; Vocational Followup; Work Attitudes
IDENTIFIERS *Hawaii

ABSTRACT

This document compiles two reports from the student flow project for Hawaii community colleges. The first contains a review of previously conducted employer follow-up studies in Hawaii and in other states, selected excerpts from employer survey instruments, and a proposal for an employer follow-up study of Hawaii community college graduates. The second contains the results of the subsequent study. Employers (n=172) of 217 graduates were contracted by means of a questionnaire and asked to evaluate the effectiveness of community college programs in preparing graduates for work, to suggest how the colleges might improve their programs, and to relate their priorities regarding the importance of skills, attitudes and knowledge in preparing students for employment. Data analysis indicated: (1) 78% of the employers felt the colleges to be doing a satisfactory or good job in preparing students for employment; (2) top priority in community college education for employment was given to inculcation of positive work attitudes and habits, and effective human relations; (3) concern for improvement in basic skills was expressed by approximately one-fourth of the employers; and (4) the personal attributes of graduates were given generally higher ratings by employers than were general occupational knowledge, basic skills, and judgement and creativity. Appended are the survey instrument and breakdowns of the survey data by campus and by program. (JDS)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED138325

A PROPOSAL FOR SURVEYING

THE EMPLOYERS OF 1975-76 COMMUNITY COLLEGE GRADUATES

Report No. 14

Student Flow Project

October 1976

Office of the Chancellor for Community Colleges
Educational Services Division
University of Hawaii

JC 770 254

The activity which is the subject of this report was supported in part by the U.S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

Table of Contents

		Page
A.	Introduction	1
B.	Review of the Literature	1
	1. Employers' Surveys by Hawaii's Community Colleges	2
	2. Employers' Surveys in Other States	4
C.	Proposed Survey of Employers	11
	1. Purposes of the Survey	11
	2. Plan for Conducting the Survey	11
	3. Draft of the Letter to Graduates	12
	4. Draft of the Employers' Survey	13
D.	Concluding Note	15
APPENDIX A	Honolulu Community College: Manpower Survey Project Questionnaire	16
B	Questionnaires Used by Kauai Community College	20
Table 1	Institutions Which Conducted Employers' Surveys, by State	5

A. Introduction

One phase of our Student Flow Project deals with a survey of graduates each academic year to obtain data on post-graduation activities. At the present time, such a survey is being conducted by the Survey Research Office for the entire University of Hawaii--the University of Hawaii at Manoa, Hilo College, and the seven community colleges.

As a supplement to this, we are exploring the feasibility of annual or periodic surveys of the employers of our community college graduates. We are especially interested in employers' evaluations of how well we have prepared our graduates for work. We also hope to receive suggestions for improving our curriculum and instruction.

Although some programs in our community colleges conduct surveys of employers' evaluations, no campus does so for all its programs. Neither has there been a systemwide survey involving all seven community colleges.

As we developed preliminary plans for undertaking a systemwide study, we decided to:

1. prepare a report reviewing the literature on employers' surveys with a focus on the type of questions included

2. include in the report a proposal for surveying employers of our 1975-76 graduates

3. seek the assistance of community college personnel and employers in refining the proposal.

This report has therefore been prepared to enable discussion and review of our proposal.

B. Review of the Literature

We were very aware of the need to locate employers' surveys conducted by our community colleges as well as to review the literature. We needed to learn as much as possible from the experience of others who had engaged in similar studies.

Our campuses were requested by the Chancellor for Community Colleges to share their surveys and results with us. In reviewing the literature, we relied heavily on ERIC Clearinghouses, particularly the one for Junior Colleges (University of California at Los Angeles). We also contacted the ERIC Clearinghouse in Career Education (Northern Illinois University) and the one in Higher Education (George Washington University) as well as the Library of Congress for books on this subject. The results of these endeavors are summarized briefly in this section.

1. Employers' Surveys by Hawaii's Community Colleges

We received responses from all seven community colleges, either from the Dean of Instruction or the Dean of Students. Many of the employers' surveys were conducted by Hawaii's community colleges to obtain data on needs for personnel and desired training for such personnel. The following surveys are examples:

--Honolulu CC — Manpower Survey Project; A Survey of Industry Opinion, by Ross Prizzia, research consultant (1973).

--Kapiolani CC — "Interpretation of Legal Assistant's and Attorney's Surveys" by Legal Assistant Program Director (1975).

"Curriculum Guide for Hospitality Education" by Henry Kalani (May 1975).

"A Survey of Word Processing in the City and County of Honolulu and Its Implications for Curriculum Development at Kapiolani Community College" by Amy Shinoki (May 1976).

--Leeward CC — Questionnaire entitled "Community Service Needs Survey"

--Windward CC — Copies of questionnaires relating to employment needs in the following areas:

a. Corrections Agency/Security Personnel
b. Banking and Finance

The manpower survey by Honolulu Community College was most comprehensive in its coverage and was designed to help improve the quantity and quality of educational programs at that college. The questionnaire had several types of questions:

#1-14	demographic data on employers and industries
#15	rating the importance of 13 general technical skills
#16	rating the importance of specific technical skills (There were 13 different renditions.)
#17-19	rating the importance of 15 personal traits, 5 personal habits, and 13 personality characteristics
#20-29	open-ended questions to compare the relative importance of technical and social skills, to give employers opportunity to express their perceptions of the performance of vocational education graduates and of the viability of Honolulu's vocational programs.

See Appendix A for a copy of this questionnaire.

In all, there were 257 respondents, representing 15 percent of the total population of relevant industries for the following vocational programs at Honolulu: applied arts, architectural drafting, automotive mechanics technology, aviation maintenance technician, carpentry, electronics technology, engineering, heavy equipment maintenance and repair, industrial electricity, metal working technology, refrigeration and air conditioning, sheet metal and plastics technology, welding.

Following is a summary of the findings relating to evaluation of graduates as a group:

> On the whole, HCC graduates were perceived to be adequately prepared technically and socially, to do the job required of them. However, the great majority of industry respondents perceived social skills just as important as technical skills, and further predicted that social skills would become even more important in the future. Those respondents who were familiar with HCC graduates found that they lacked training in some necessary areas. Though industry respondents for some vocational departments perceived this lack of training to involve necessary technical skills, a more significant number of all respondents found HCC graduates lacking in areas which concerned social skills.
>
> There is an apparent need for closer association between the academic institutions and industry in developing a relevant curriculum for each of the vocational education programs. Most industry respondents expressed gratitude in being asked to comment on ways of improving the curriculum of the various departments, and many hoped for further participation. . . . (pp. 57-58)

The hospitality education survey at Kapiolani Community College attempted to gather data on skills and knowledge required before hire and during employment. Employers were also asked to define the level of competency desired in various areas; e.g., office equipment use, computation skills, food preparation and service, second language skills.

The word processing study at Kapiolani involved the administration of a survey which asked employers to: (a) specify their anticipated increase in the number of entry level employees within the next five years; (b) rate the importance of specific items grouped under verbal communication, office skills, understanding of management subject areas and business attitudes; (c) express desired levels of speed and accuracy in the use of standard and automatic typewriters.

The Community Service Needs Survey of Leeward Community College was conducted in September 1976. Questionnaires were sent to 100 human service agencies requesting them to indicate: (a) their needs for employees and the nature of qualifications; (b) their agencies' training programs; (c) their interest in the college's placement service and in membership on the advisory board for human services.

Another type of employers' survey was undertaken by Maui Community College to identify suitable work stations in the community for cooperative education programs.[1] Academic credit for such work experiences is granted to both liberal arts and vocational education majors. The questionnaire, which was sent to business firms, governmental agencies and non-profit organizations in the community, included items on: (a) the employment of part-time or temporary employees and the time of day and year for such employment; (b) the willingness of employers to provide on-the-job training to "interested and capable" students; (c) the type of work schedule desired by employers; (d) the nature of jobs most suitable for the cooperative education program.

Still another kind of employers' survey was sent in by the Office of Cooperative Education, Kauai Community College.[2] The purpose of these surveys (one for liberal arts majors and another for business and trade technical majors) was to obtain an evaluation of the trainees' work. The questionnaire includes items on job skills, personal characteristics and attitudes, attendance and an overall rating. In addition to the evaluation of trainees, employers are also asked to complete a "program evaluation" questionnaire. See Appendix B for a copy of these survey forms.

It is apparent that employers' surveys have been used in various ways by Hawaii's community colleges:

--to identify employers' needs for employees in terms of number and desired training

--to seek employers' assistance in cooperative education programs

--to obtain employers' evaluations of graduates and cooperative education students

--to solicit employers' evaluations of vocational education programs.

Our proposed survey of the employers of our 1975-76 community college graduates will focus on employers' evaluations of educational programs in preparing our graduates for employment.

2. Employers' Surveys in Other States

As indicated earlier, we felt that our single best source of references would be ERIC publications. While this is not an exhaustive review of the literature on employer surveys, we hope that it will satisfactorily serve as background for reviewing our proposal to survey the employers of our 1975-76 graduates. Our summary therefore concentrates on the kinds of questions included in other surveys.

---

[1] "Maui Community College: Cooperative Education Programs; Job Station Development and Student Interest; Survey Report," by Cecile Kong (June 30, 1976). Leeward Community College has an employers' information guide which provides an opportunity for companies to indicate an interest in the Cooperative Vocational Education Program.

[2] Hawaii and Leeward community colleges also have evaluation forms for the employers of cooperative education students.

a. General Nature

We were able to locate reports of employers' surveys by 19 institutions in 12 states as well as to find questionnaires only for others. (See Table 1.)

TABLE 1
INSTITUTIONS WHICH CONDUCTED EMPLOYERS' SURVEYS, BY STATE

State and Institution	Survey Form Only	Survey Form and Results	Title of Report
CALIFORNIA			
Bakersfield College		x	Survey of Auto Mechanic Employers (February 1975).
Los Angeles City College	x		
Pasadena City College	x		
FLORIDA			
Gulf Coast Community College	x		
Miami Dade Community College		x	An Employment Study of Miami-Dade Community College 1972-1973 Career Education Students and Their Employers (June 1975).
ILLINOIS			
Community College Board		x	Statewide Occupational Student Follow-up Study, Phase I. Preliminary Report (June 1975).
Decatur Community College		x	The Identification of Occupational Education Program Demand (June 1974).
Moraine Valley Community College		x	Employer Evaluation of 1973-74 Occupational Graduates (September 1975).
William Rainey Harper Community College		x	Market Analysis of Proposed New Programs in a Growing Community College (April 1974).
MARYLAND			
Montgomery Community College		x	The Employers II; A Survey of Employers Who Have Hired Career Program Graduates (1975).
MINNESOTA			
Minnesota University Technical College		x	Follow-up and Evaluation of Graduates (and) Employer Evaluation of Graduates in Minnesota Collegiate Technical Education (n.d.)
St. Mary's Junior College		x	Follow-up Studies in Nursing: A Case for Determining Whether Program Objectives Are Achieved (August 1972).
University of Minnesota Vocational Follow-up System		x	The Minnesota Vocational Follow-up System; Rationale and Methods (February 1973).
MISSOURI			
Maple Woods Community College		x	Follow-up of Maple Woods Community College Occupational Graduates, 1970-1974 (March 1975).
NORTH CAROLINA			
State Board of Education		x	The Dissemination of Local-Level, Long-Range Planning Systems to North Carolina Technical Institutes and Community Colleges (April 1975).
OREGON			
Portland Community College		x	Status of Spring 1971 Graduates (September 1972).
PENNSYLVANIA			
Harrisburg Area Community College		x	The Employment of Career Graduates (1972).
Williamsport Area Community College		x	A Follow-up Study of Graduates and Employers Relating to the Business Administration Curricula of the Williamsport Area Community College (September 30, 1974).
SOUTH CAROLINA			
Advisory Council on Vocational and Technical Education		x	The Adequacy of Vocational and Technical Education (February 1976).
TEXAS			
El Paso Community College		x	El Paso Manpower Needs Assessment for Educational Planning (October 1973).
McLennan Community College		x	The Assessment of Business and Industry Needs; Phase II of Multi-County Assessment of Adult Needs Project (1975).
UTAH			
State Advisory Council for Vocational and Technical Education.		x	Are Employer Needs Being Met? A Report: Vocational Education Employer Needs Survey (February 1976).

Most of the surveys were conducted by the community colleges themselves, although a few were carried out by boards who had statewide responsibility for vocational/technical education (e.g., Illinois Community College Board, South Carolina Advisory Council on Vocational and Technical Education and Utah State Advisory Council for Vocational and Technical Education).

There is a variety of reasons for conducting surveys of employers. Many institutions use these surveys in planning and initiating new vocational programs. Such questionnaires concentrate on assessing the needs for personnel--present and anticipated--in terms of number and desired training. Such surveys of community needs can be in a specific area (like automotive mechanics) or in general terms (all kinds of employees who may be needed). The latter usually attempts to contact a representative sample of employers in the community.[3]

Other institutions try to determine the community's awareness of their programs. Such surveys assess the degree to which employers are familiar with their pre- and in-service training programs and whether their colleges are considered a source of new hires. Both South Carolina and Utah included questions of this nature in their surveys. Some questionnaires also provide employers with the opportunity to express their willingness to serve on advisory committees, to identify positions which can be assumed by work/study and/or cooperative education students.

Still other colleges seek employers' evaluations of graduates or former students in their employ. This is usually done by soliciting individual or group evaluations of graduates.

b. Sample Questions in Employers' Evaluations

(1) Graduates as a Group: Surveys of this type were conducted by Minnesota University Technical College, Harrisburg Area Community College, and Williamsport Area Community College as well as by the statewide advisory councils in South Carolina and Utah. Sample questions from South Carolina and Utah are given below:[4]

---

[3]Surveys of community needs were conducted by Bakersfield College, California; North Carolina State Board of Education; El Paso Community College and McLennan Community College in Texas.

[4]South Carolina Advisory Council on Vocational and Technical Education, The Adequacy of Vocational and Technical Education; The Report of a Special Study (February 1976). Utah State Advisory Council for Vocational and Technical Education, Are Employer Needs Being Met? Vocational Education in Utah (February 1976).

South Carolina:

10. *How would you rate these technical and/or vocational education graduates in relation to other employees in similar positions?*

_____ *Extremely Capable*
_____ *Very Capable*
_____ *Somewhat Capable*
_____ *Not As Capable*

12. *Will you consider vocational or technical education graduates again when you need similarly trained employees?*

_____ *Yes, vocational graduates*
_____ *Yes, technical graduates*
_____ *Yes, both vocational and technical graduates*
_____ *No, neither vocational nor technical graduates. Why?* _____

_____

14. *To what extent do you feel the technical education colleges/centers in your area are meeting the occupational training needs of the students?*

_____ *To a Very Great Extent*
_____ *To a Great Extent*
_____ *To Somewhat of an Extent*
_____ *To Not That Great of an Extent*
_____ *To No Extent at All*

16. *And using a "0" to "10" scale with "0" being the lowest rating and "10" the highest how would you rate the technical and vocational schools in your area in terms of the overall quality of their education?*

Vocational Education: 0 1 2 3 4 5 6 7 8 9 10
Technical Education: 0 1 2 3 4 5 6 7 8 9 10

17. *To what extent do you feel that the technical colleges/centers in your area are meeting the occupational needs of your business or industry?*

_____ *To a Very Great Extent*
_____ *To a Great Extent*
_____ *To Somewhat of an Extent*
_____ *To Not That Great of an Extent*
_____ *To No Extent at All*

Utah:

1. *During the past two years have you hired employees from the vocational education system?*

   High school ☐ *Yes* ☐ *No*
   Post-high school ☐ *Yes* ☐ *No*

2. *How well does the vocational education system prepare prospective employees for your firm?*

   _____*poorly*
   _____*barely adequate*
   _____*adequate*
   _____*effective*
   _____*very effective*

3. *How would you rate current employees who have received formal vocational training as to quality of work and job skills as compared with those who have had no vocational training?*

   _____*very low*
   _____*low*
   _____*average*
   _____*above average*
   _____*high*

19. *Does your firm pay more money to a new employee who has an Associate (two-year) degree as compared to one who has a Certificate of Completion?*

   _____*usually*
   _____*not really*

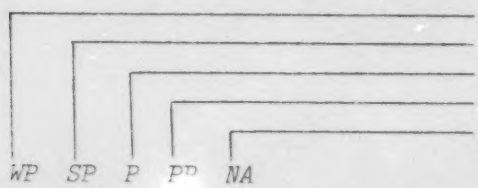
(2) Graduates as Individuals: Generally included in these surveys are questions on the skills and knowledge of specific graduates. This type of approach is found in questionnaires sent out by Gulf Coast Community College and Miami-Dade Community College in Florida, Moraine Valley Community College in Illinois, the University of Minnesota's Vocational Follow-up System, Portland Community College in Oregon, and Harrisburg Area Community College in Pennsylvania.

Presented below are illustrative questions from surveys administered by the Illinois Community College Board and Montgomery Community College in Maryland.[5]

[5] Illinois Community College Board, Statewide Occupational Student Follow-up Study: Phase I. Preliminary Report (June 1975). Maryland, Montgomery Community College, The Employers II; A Survey of Employers Who Have Hired Career Program Graduates of Montgomery Community College (1975).

Illinois Community College Board:

3. *In the following aspects of employment, how well prepared was the employee named above for the job for which hired?*



					1. *Job know-how, application of technical knowledge and skill*
					2. *Use of tools and equipment*
					3. *Selection and care of space, materials, and supplie*
					4. *Quality of work, ability to meet quality demands*
					5. *Quantity of work, output of satisfactory amount*
					6. *Cooperativeness, ability to work with others*
					7. *Accepting advice and supervision*
					8. *Dependability, thorough completion of a job without supervision*
					9. *Initiative, doing jobs that need doing*
					10. *Attendance, reporting for work regularly*
					11. *Appearance, presenting a business image*
					12. *Adaptable to new situations*
					13. *Being able to talk to the boss about job related problems*
					14. *Serving the public, patient, etc.*
					15. *Safety habits, minimizing chance for accidents*

4. *How would you rate the overall suitability of the employee named above for the kind of job held?*

_____ *Excellent*
_____ *Good*
_____ *Fair*
_____ *Poor*

Montgomery Community College:

3. *Do you give preference to a prospective employee with an Associate degree over a person with two years of college and no degree?*

   (1) ____Yes
   (2) ____No

4. *If an employee in your organization earned an Associate degree would he/she: (Check appropriate response)*

A. Have increased chances of being promoted	1 ☐ Never	2 ☐ Unlikely	3 ☐ Sometimes	4 ☐ Usually	5 ☐ Always
B. Be expected to assume greater responsibilities	1 ☐ Never	2 ☐ Unlikely	3 ☐ Sometimes	4 ☐ Usually	5 ☐ Always
C. Be expected to perform job tasks requiring a high level of skills	1 ☐ Never	2 ☐ Unlikely	3 ☐ Sometimes	4 ☐ Usually	5 ☐ Always

5. *Based on your own experience of supervising a Montgomery College graduate please indicate how adequate you feel the College prepared her/him in each of the areas listed below. (Check appropriate response.)*

	Inadequate 1	Adequate 2	More than Adequate 3	Not Observed 0
A. Depth in the various areas of knowledge required by the job is	☐	☐	☐	☐
B. Scope of the various areas of knowledge required by the job is . .	☐	☐	☐	☐
C. Understanding of the theory behind the tasks performed is	☐	☐	☐	☐
D. Performance of job skills from the beginning of employment was	☐	☐	☐	☐
E. Familiarity with equipment and machines used in your operation in the beginning was	☐	☐	☐	☐
F. Ability to communicate with superior is	☐	☐	☐	☐
G. Ability to get along with fellow workers is	☐	☐	☐	☐
H. Overall work attitude is . .	☐	☐	☐	☐

6. *Would you employ another Montgomery graduate who has a degree in the same area as your current employee?*

   (1) ____Yes - without reservation
   (2) ____Yes - with careful screening
   (3) ____No - Why? _____

C. Proposed Survey of Employers

1. Purposes of the Survey

The purposes of this proposed survey of employers are to obtain their:

a. evaluations of the effectiveness of our training programs in preparing graduates for work in terms of their skills, knowledge and attitudes

b. suggestions on how the community colleges might improve their educational programs.

2. Plan for Conducting the Survey

a. General Procedure

Among the respondents to the graduate survey being conducted on all nine campuses of the University of Hawaii this Fall, we will identify the community college graduates who are employed full time and seek their assistance in providing us with the names of their supervisors and the appropriate addresses of their employers. No follow-up letter is being planned since we prefer to have the graduates respond out of a spirit of cooperation. Since this is our first effort, it is difficult to estimate what the percentage of response will be.

We will then send a letter and questionnaire to the supervisors of our employed graduates in mid-January 1977. Follow-up efforts may be necessary.

The responses of supervisors will be analyzed in terms of graduates' characteristics included in our Student Flow Project (sex, age, program, degree, grade point average, for example). There will also be an attempt to relate employers' responses to employment data furnished by the graduate in the graduate survey. If possible, we will also try to obtain general demographic data on responding and non-responding employers or companies.

b. Specific Procedures to Refine the Questionnaire

An initial draft of the questionnaire is presented in this report. It will be discussed with the following two groups, and their suggestions will be used in making revisions:

--Advisory Committee: individuals with experience and/or expertise in the conduct of surveys, especially employers' surveys. This committee will probably meet once in November.

--Deans of Instruction and Deans of Students of the Community Colleges: A meeting on the Student Flow Project is scheduled for early December. One of the items on the agenda is the draft of the employers' survey.

3. Draft of the Letter to Graduates

Dear

We thank you for completing the questionnaire sent to you and other graduates of the community colleges. We will study your responses so that we may find ways of improving our programs.

We are also interested in asking the employers of our 1975-76 community college graduates to evaluate our educational programs and to make suggestions for improving them. We again need your help and hope that you will participate in this effort by providing us with the following information so that a questionnaire may be sent to that person:

Your employer or company: _____

Your employer's or company's address: _____ Zip ____

Your supervisor's name: _____

Your supervisor's title: _____

Please be assured that responses on the employers' questionnaires will be kept confidential. Summaries will be prepared for group, not individual, responses.

We would appreciate hearing from you as soon as possible. A self-addressed, stamped envelope is enclosed for your convenience.

Thank you very much for your help and cooperation in making our survey of employers possible.

Sincerely,

_____
Shiro Amioka
Chancellor for Community Colleges

4. Draft of the Employers' Survey

Dear

The Community College System of the University of Hawaii is conducting an evaluation of its educational programs. We are seeking the assistance of the supervisors of our most recent graduates who are employed full time.

You have been identified as a supervisor by one of our 1975-76 community college graduates who are aware that questionnaires will be sent to employers. As the supervisor of this graduate, your evaluations and suggestions will be invaluable in helping us improve our programs.

Please share your knowledge with us and be assured that your responses will be confidential. A stamped, self-addressed envelope is enclosed for your convenience.

We would appreciate hearing from you as early as possible. If you have any questions, please call Mrs. Irene Nakamura at 948-7471.

We look forward to your response and thank you for your help.

Sincerely,

Shiro Amioka
Chancellor for Community Colleges

DRAFT OF THE QUESTIONNAIRE

SURVEY OF EMPLOYERS OF 1975-76 COMMUNITY COLLEGE GRADUATES

Employee's Name: _____

1. Is the above-named person still in your employ?

___1. Yes ___2. No; termination was: ___voluntary
___not voluntary

2. Position of this employee: _____

3. On the basis of your experience with this employee, how adequately do you believe the community colleges are developing the following skills and attitudes? Please check the appropriate box.

Skills and Attitudes	0. Not Applicable	1. Not Adequately	2. Somewhat Adequately	3. Adequately	4. More Than Adequately
a. Job know-how, application of technical skills and knowledge					
b. Use of tools, equipment, machines					
c. Computation skills					
d. Reading/writing/speaking skills					
e. Judgment; ability to make decisions, plan, organize					
f. Positive attitude toward work					
g. Cooperativeness; ability to work with others					
h. Ability to accept advice and supervision					
i. Ability to assume responsibility					
j. Initiative; performs necessary work without being told					
k. Adaptability to new work assignments					
l. Good attendance and punctuality					
m. Appropriate grooming					

4. Based on your experience with community college graduates, what is your overall impression of the efforts of the community colleges in preparing students for employment?

___1. Poor ___2. Satisfactory ___3. Good ___4. Excellent

5. Is it an advantage for an employee to have graduated from a community college?

___1. Yes; comments: _____

___2. No; comments: _____

6. Please suggest ways in which the community colleges might improve their training. (Any skills, knowledge, attitudes, that need improvement? Any specific areas that need strengthening?)

7. Total number of employees in your company in the State of Hawaii:

___1. Under 25 ___2. 26-100 ___3. 101-500 ___4. Over 500

Mahalo.

D. Concluding Note

This report attempts to provide our community colleges with some background on the variety and use of employers' surveys. We urge campus personnel to review the draft of the questionnaire and to offer suggestions for improvement to their Dean of Instruction or Dean of Students who will be meeting on December 6, 1976, to review the proposed survey of employers. The administration of the questionnaire is planned for mid-January 1977.

APPENDIX A
HONOLULU COMMUNITY COLLEGE
MANPOWER SURVEY PROJECT QUESTIONNAIRE

SURVEY INSTRUMENT

(Background) HCC code No. ADT

1. Company Name: _____

   Address: _____

2. Location:

   _____ Honolulu _____ Pearl City _____ Leeward _____ Kailua

3. Length of time in operation:

   _____ 1-5 years _____ 6-10 years _____ 11-25 years _____ over 25 years

4. Type of business:

   _____ Private _____ Public (state, city) _____ Union

5. Nature of Business (HCC Code):

   _____ Automotive (AMT) _____ Automotive (HEMR) _____ Aviation (AVMAT)

   _____ Architectural drafting (ADT) _____ Electronic (ET) _____ Metal work (MWT)

   _____ Carpentry (CARP) _____ Engineering (ENGT) _____ Applied art (APART)

   _____ Sheet metal & plastics (SMP) _____ Welding (WELD)

   _____ Industrial Electricity (IE) _____ Refrigeration & air conditioning (RAC)

   _____ Other (specify)

6. Type of on-the-job training offered:

   _____ None _____ In-service training

   _____ Apprenticeship program _____ Other (specify) _____

7. Size of business, firm, or public organization:

   _____ Big _____ Medium _____ Small

8. Number of employees in specified technical area: (welding, sheetmetal etc.)

   _____ 1-5 _____ 6-12 _____ 13-25 _____ over 25

9. Average work load per year:

   _____ $25,000-50,000 _____ $51,000-100,000 _____ $101,000-500,000

   _____ $501,000-one million _____ over one million

10. Occupation of respondent:

    _____ owner/supervisor _____ personnel _____ union representative

    _____ supervisor _____ expeditor _____ foreman _____ other (specify) ___

11. Relative position of respondent:

    _____ high-level _____ middle-level _____ base-level

12. Job openings most frequent:

    _____ high-level _____ middle-level _____ base-level

13. Estimate of number of HCC students who were former employees or are present employees:

    _____ None _____ 1-4 _____ 5-10 _____ 11-20 _____ over 20

14. Which of the following statements would best express your opinion about HCC trained employees.

    a. _____ seem to be well trained technically in all necessary areas.

    b. _____ lack necessary training in some areas, but on the whole are good employees.

    c. _____ Lack necessary training in most areas.

    d. _____ don't know about HCC employees

(Technical Skills)

15. Please indicate the importance you stress on the following general technical skills as it applies to your present and future employees.

	Very Important	Important	Not So Important	Not Important At All
a. Ability to measure within specific tolerances.	____	____	____	____
b. Ability to use judgement in terms of a work-cost relationship.	____	____	____	____
c. Ability to use mathematics as tools in the development and solving of problems.	____	____	____	____
d. Ability to use judgement for specific work application.	____	____	____	____
e. Ability to take all safety precautions required of the job.	____	____	____	____
f. Ability to operate basic office and shop equipment.	____	____	____	____
g. Ability to sketch and design.	____	____	____	____
h. Ability to use and understand related manufacturer's product directory, specifications, and/or service manuals.	____	____	____	____
i. Ability to manipulate basic hand tools.	____	____	____	____
j. Ability to identify and solve problems (e.g. trouble-shooting).	____	____	____	____
k. Basic knowledge of blue print readings and layouts.	____	____	____	____
l. Ability to interpret drawings and sketches.	____	____	____	____
m. Ability to write reports.	____	____	____	____
n. Other (specify) _____ _____	____	____	____	____

Note: There are 12 other renditions of item 16.

16. Please indicate the importance you stress on the following specific technical skills as it applies to your present and future employees.

	Very Important	Important	Not So Important	Not Important At All
a. Ability to draft and letter accurately, quickly and neatly.	____	____	____	____
b. Ability to compose or arrange different drawings or details or parts of drawings in order that they may be easily understood by the viewer.	____	____	____	____
c. Ability to use manufacturer's information (i.e. Sweets Catalog) and be able to produce workable details expressed in drawings.	____	____	____	____
d. Ability to coordinate and correlate a complete set of working drawings (including Architectural, Structural, Civil, Mechanical, Electrical, and Landscape changes)(i.e. ability to spot discrepancy among drawings.)	____	____	____	____
e. Ability to draw parts of, or completely, building details constructed of wood, concrete, or steel if the decision making process of design is left to the architect or engineer.	____	____	____	____
f. Ability to use different medias other than drawings in communicating. (i.e. photographs, models, etc.)	____	____	____	____
g. Ability to draw a dwelling unit (one or two stories) independently.	____	____	____	____
h. Other (specify) _____ _____	____	____	____	____

Comments:

17. Please indicate the importance by level of employment you place on the following "traits" as it applies to your present and future employees, by inserting the numbers 1--4 in the space provided. (i.e. very important--1, important--2, slightly important--3, not important--4.)

	High	Middle	Base
a. Cooperative with fellow workers.			
b. Cooperative with supervisors.			
c. Enthusiastic concerning job			
d. Communicates effectively.			
e. Follows directions carefully.			
f. Accepts criticism constructively.			
g. Takes orders agreeably.			
h. Shows initiative.			
i. Gives instruction effectively.			
j. Works with accuracy.			
k. Efficient in the use of time.			
l. Learns quickly.			
m. Works rapidly.			
n. Completes assignments.			
o. Uses good judgement.			
p. Other (specify) _____			

18. Please indicate the importance you stress on the following personal habits as it applies to your present employees.

	Very Important	Important	Not So Important	Not Important At All
a. Personal neatness and cleanliness.				
b. Orderliness (work area).				
c. Punctuality.				

18. continued

	Very Important	Important	Not So Important	Not Important At All
d. Courteousness.				
e. Loyalty.				
f. Other (specify) _____				

19. Please indicate the importance you place on the following personality characteristics as it applies to your present and future employees.

	Very Important	Important	Not So Important	Not Important At All
a. Self-reliant.				
b. Objective.				
c. Spontaneous, natural.				
d. Self-confident.				
e. Constructive.				
f. Ambitious.				
g. Individualistic.				
h. Resourceful.				
i. Creative.				
j. Responsible.				
k. Honest.				
l. Able to communicate feelings.				
m. Cares about others.				
n. Other (specify)_____				

20. How do you feel about the following statements:

	Agree	Disagree	Don't Know
a. HCC graduates demonstrate they are well prepared technically to do the job required of them.			
b. HCC graduates demonstrate that they possess the necessary personal traits for the job.			

20. Continued

	Agree	Disagree	Don't Know
c. We have never hired HCC graduates	____	____	____
d. We usually don't make the final decision on job placement--the union does.	____	____	____
e. A great part of, but not all of, the decision in hiring is determined by unions.	____	____	____

21. What personal traits or habits do you feel are the most important to do the job effectively. (Please specify)

_____

_____

_____

22. What technical skills do you feel are the most important to do the job effectively. (Please specify)

_____

_____

_____

23. Which personality characteristics of those mentioned above (question19) do you feel are the most important to do the job effectively. (Please specify)

_____

_____

_____

24. How would you compare the relative importance of personal traits and technical skills as mentioned above?

	Agree	Disagree	Don't Know
a. Personal traits are more important than technical skills.	____	____	____
b. Personal traits are just as important as technical skills.	____	____	____
c. Personal traits are less important than technical skills.	____	____	____
d. Personal traits are not at all as important as technical skills.	____	____	____

24 Continued

	Agree	Disagree	Don't Know
e. Personal traits are not at all important.	____	____	____

25. Do you think that an employee's personal traits are becoming more important than they were, say ten years ago?

_____yes
_____about the same
_____no
_____no, less important than ten years ago
_____no opinion

26. Do you think that some of the personal traits mentioned above will become more important in the future, say, ten years from now?

_____yes
_____about the same
_____no
_____no, less important
_____no opinion

27. What are the major sources of dissatisfaction, if any, with the job conditions of your employees? (Please specify)

_____

_____

_____

28. Would you please volunteer the name of one of your employees who you think poseeses the personality and personal and technical skill which you deem most important for his job. _____

29. Is there anything you would like to mention or add to the discussion about necessary technical skills, personal traits and abilities, or HCC employees in general? (Any special comments you would like to make?)

_____

_____

_____

_____

_____

APPENDIX B
QUESTIONNAIRES USED BY KAUAI COMMUNITY COLLEGE

KAUAI COMMUNITY COLLEGE: BUSINESS & TRADE TECHNICAL PROGRAMS
COOPERATIVE EDUCATION PROGRAM
STUDENT EVALUATION SHEET

COMPANY NAME _____

SUPERVISOR'S SIGNATURE _____

Student's Name _____ Semester _____ Date _____
First Middle Last

Place a check mark for each item in the column which most appropriately describes the student.

	1	2	3	4	5
1. QUALITY OF WORK	Work is poor.	Work is inaccurate and below standard.	Work is satisfactory.	Work is well done and accurate	Work is of highest quality.
2. ATTENDANCE	Absent all the time.	Absent often. (2 a month)	Absent occasionally. (1 a month)	Is rarely absent. (1 in 2 months)	On the job every day.
3. PROMPTNESS-PUNCTUALITY	Always late.	Frequently late. (4 a month)	Usually on time by occasionally late. (2 a month)	Rarely late (1 in 2 months)	Always on time.
4. ATTITUDE	Unpleasant.	Usually unpleasant.	Average.	Usually pleasant.	Always pleasant.
5. DEPENDABILITY	Undependable.	Dependable on some occasions.	Usually dependable	Usually very dependable.	Thoroughly dependable.
6. COOPERATION	Cannot work with others.	Works with others but has some difficulties.	Meets others halfway.	Generally works well with others.	Works very well with others.
7. EFFORT	Does as little as possible.	Seldom completes required work.	Does work that is required.	Occasionally does extra work.	Very industrious. Does extra work gladly.
8. INITIATIVE	Must be told and constantly pushed.	Requires urging. Goes ahead only when told.	Takes hold and proceeds with only a suggestion.	Plans many of his activities and executes them.	Marked ability to think for himself. Carries out ideas.
9. CONSTRUCTIVE CRITICISM	Resent criticism.	Seldom accepts criticism.	Usually accepts criticism.	Accepts criticism well. Tries to improve.	Welcome criticism Makes improvement.
10. PERSONAL NEATNESS	Very untidy.	Usually untidy.	Usually neat. Satisfactory.	Very neat.	Outstandingly neat.
11. IMPROVEMENT ON THE JOB	No improvement.	Slight improvement.	Satisfactory Improvement.	Considerable Improvement.	Marked improvement.

COMMENTS: Supervisors are encouraged to make additional comments on back page.

UNIVERSITY OF HAWAII • KAUAI COMMUNITY COLLEGE

PROGRAM EVALUATION BY EMPLOYER

We are interested in determining how effective the cooperative education programs for the students have been. Of more importance, based on your response, we hope to improve the program for the next semester.

	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
Job Skills: Interns developed job skills necessary to fulfill tasks as stated in the learning objectives.				
Attitude as a Worker: The program fosters students to develop and maintain good working relationships with fellow employees.				
Preparation for Advancement and Greater Responsibility: The program allows students to make progress toward future job advancements and assuming greater responsibilities.				
The program has helped meet some of my recruiting demands.				
Job Objectives and Project Papers: Job oriented learning objectives are valuable tools in evaluating student performances.				
Project papers are valuable tools in evaluating student job competency. (Where applicable)				
Job Development: The co-op program provides the community colleges the opportunity to develop meaningful job situations in the community.				
The program provides an important link between the college and community.				
Employer's Role in Program My role in this program has been to support the community college program in giving students career exploration and reinforcing opportunities.				
I will continue to support the community college cooperative education program.				

SURVEY OF EMPLOYERS

OF 1975-76 COMMUNITY COLLEGE GRADUATES

Report No. 24

Student Flow Project

April 1977

Office of the Chancellor for Community Colleges
Educational Services Division
University of Hawaii

The activity which is the subject of this report was supported in part by the U.S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

TABLE OF CONTENTS

		Page
A.	Introduction	1
	1. Purposes	1
	2. Plan for Analysis	1
	3. Organization of This Report	2
B.	The Survey	3
	1. Identification of Employers	3
	2. Administration of Employers' Survey	3
C.	Representativeness Data	3
D.	Findings	7
	1. The Employers	7
	2. Evaluations of Community College Preparation	8
	3. Employers' Priorities in Community College Education	14
	4. Employers' Comments	19
E.	Summary and Conclusion	25
	1. Summary of Major Findings	25
	2. Concluding Comments	26

APPENDIX	A	The Questionnaire	27
	B-1	Campus Tables	28
	B-2	Program Tables	35
	C	Employer Surveys in Other States	40

LIST OF TABLES

		Page
1.	Representativeness Data	5
2.	The Employers: Size of Company	7
3.	The Employers: Number of Community College Graduates in Employ	8
4.	Employers' Overall Impression of Community College Preparation	9
5.	Employers' Overall Impression of Community College Preparation, by "Significant" Characteristics	9
6.	Employers' Evaluations of Community College Preparation, by Ratings	10
7.	Employers' Evaluations of Community College Preparation, by "Significant" Characteristics	12
8.	Employers' Priorities	14
9.	Employers' Priorities, by "Significant" Characteristics	16
10.	Employers' Single Most Important Item	17
11.	Employers' Single Most Important Item, by "Significant" Characteristics	18
12.	Employers' Single Least Important Item	19

A. Introduction

In October 1976 a proposed approach to a first statewide survey of the employers of our community college graduates was made in Report No. 14 of the Student Flow Project. That report indicated that the preliminary draft of the questionnaire would be further refined in meetings with two groups: (1) an advisory committee composed of individuals with experience and/or expertise in the conduct of surveys, especially employers' surveys and (2) the deans of instruction and deans of students of the seven community colleges. A copy of the final draft of the questionnaire is found in Appendix A.

1. Purposes

The purposes of surveying the employers of community college graduates, as stated in Report No. 14, are to obtain their:

a. evaluations of the effectiveness of our programs in preparing graduates for work in terms of their skills, knowledge and attitudes

b. suggestions on how the community colleges might improve their educational programs.

In addition, the revisions made to the preliminary draft of the questionnaire were motivated by a third purpose--to obtain employers':

c. priorities regarding the importance of skills, knowledge and attitudes in preparing graduates for employment.

2. Plan for Analysis

Our approach required us to contact graduates who had responded to the University of Hawaii's 1975-76 Alumni Survey to obtain the names and addresses of employers. We planned no follow-up effort because we sought the completely voluntary cooperation of our graduates. We hoped that at least one-third of them would respond, but we had determined, at the outset, to proceed with the survey regardless of the return rate. We made this decision because we knew that we would learn much from our initial attempt, and that a "trial run" would provide us with valuable feedback from employers. We hoped for at least a 50 percent return from the employers.

Our plan for analysis included a summary of major findings for the community college total and the possibility of a summary of detailed findings, by campus, only if the number of respondents enabled statistical tests of significance to be meaningful for each campus. The following analyses were planned:

a. Representativeness

(1) Compare respondents and non-respondents among graduates who were asked to furnish the names and addresses of employers on the following characteristics: sex, age as of December 31, 1976, program, degree, cumulative grade point average and campus. Additional characteristics from the Alumni Survey were used for comparison: occupation, current employer grouping, place of employment, job/career relationship and annual earnings.

(2) Compare characteristics of graduates for whom employers completed the survey form with those of graduates for whom employers did not. The same characteristics as those cited above were used in analyzing representativeness.

b. Responses to each item in the questionnaire would be summarized for the community college total, by campus, by program, by cumulative grade point average and by occupational group. On selected items, there would be analysis in terms of employer group, size of company and cooperative education experiences of the graduates. Statistical tests of significance would rely on the Statistical Package for the Social Sciences (SPSS).

c. Factor analysis would be applied to the 18 items on which employers rated community college preparation of the graduates for employment.

After keypunching, all questionnaires would be returned to the campuses with an indication of the graduate's major field of study (program) but with no student or employer identification.

3. Organization of This Report

This report summarizes findings for the community college total, by campus, and by several other characteristics of employed graduates: program, grade point average and occupation. There are no details on characteristics, by campus, because the number of returns was too small for some campuses to make statistical analysis meaningful.

Data are summarized on the following:

a. The employer: size of company and number of employees who are community college graduates.

b. Evaluations of community college preparation of graduates for employment: 1 general item on an overall impression and 18 detailed specific items dealing with knowledge, skills and attitudes. There are campus tables on the latter in Appendix B.

c. Employers' priorities regarding the importance of knowledge, skills and attitudes: items dealing with single most important area and single least important area; 6 items dealing with specific knowledge, skills and attitudes.

d. Employers' comments on the community colleges in general.

Although no reference is made in the body of the report to the findings of employer surveys conducted by Mainland community colleges, there is a brief summary of selected studies in Appendix C.

B. The Survey

1. Identification of Employers

We identified the employers of our 1975-76 community college graduates by seeking the assistance of those who said they were employed full-time in responding to the University Alumni Survey conducted in September 1976.

Out of the 1,512 community college graduates who responded to the survey, 746 indicated they were employed full-time. Each of these employed students was sent a letter requesting the name and address of his employer and assuring him that we were seeking feedback on our curricula.

Of the 746 letters sent in December 1976, 34 (5 percent) were returned by the post office as non-deliverable. We received responses from 224 graduates, but only 217 (29 percent) were usable. This return rate was slightly lower than the one-third we had expected.

2. Administration of Employers' Survey

On January 10, 1977, questionnaires, accompanied by an explanatory letter, were sent to 172 employers of 217 community college graduates. Most employers were identified by only one graduate, but there was one who had 12 graduates in his employ.

By January 27, 115 employers (67 percent) had responded, covering 146 graduates (67 percent). On that day a reminder was sent to the remaining 57 employers urging them to respond. An additional 21 employers responded, covering 31 graduates, by March 9, two months after the initial mailing of the questionnaires.[1]

The total returns were:

a. 136 employers or 79 percent of those contacted.

b. 177 graduates were covered or 82 percent of the 1975-76 community college graduates who indicated they were employed full-time and who furnished employers' identification.

C. Representativeness Data

Representativeness of respondents was examined in several ways: (1) personal and academic characteristics: sex, age at the end of 1976, program, degree, grade point average and campus; (2) employment characteristics: occupation, employer, location of employment, annual income, job/career relationship, job/course relationship. The source for the former was the computer file on students; for the latter, responses of graduates to the University's Alumni Survey.

[1] Three additional questionnaires were sent in after the deadline.

Two types of data on representativeness are presented in Table 1:

1. Representativeness of graduates who furnished employer identification:

This group of respondents was representative of the graduate population who were full-time employees in Fall 1976 on several characteristics: sex, program, degree, grade point average, employer and job/career relationship. There were statistically significant differences between respondents and non-respondents on the following: age, campus, occupation, location of employment, annual income and job/course relationship. Higher proportions of the following groups were found among respondents than in the graduate population employed full-time:

--graduates over 29 years at the end of 1976
--graduates of Honolulu, Kapiolani and Kauai
--graduates who are in professional/technical/managerial and in service occupations
--graduates who are employed on Oahu and Kauai
--graduates whose annual incomes are below $3,000 and $7,500-$19,999
--graduates who feel that their course work is very relevant or somewhat relevant to their present jobs.

2. Representativeness of graduates whose employers completed the questionnaire:

This group was representative of the group whose employers received a questionnaire (referred to as "respondents" in Table 1) on several characteristics: sex, grade point average, campus, occupation, location of employment, annual income, job/career relationship and job/course relationship. There were statistically significant differences on the following characteristics between the group of graduates for whom employers completed the questionnaire and the group for whom employers did not: age, program, degree and employer. Higher proportions of the following were found among the group whose employers completed the questionnaire than among the group whose employers received questionnaires:

--graduates over 24 years at the end of 1976
--graduates from health services and public services
--graduates with certificates and A.S. degrees
--graduates employed by state government and city-county government.

In view of these data on representativeness, responses to each item are summarized, by campus, and reference is made to grade point average and occupation. Because of general interest, there may also be references to "program" although it is a characteristic that was statistically significant in comparing graduates for whom employers completed questionnaires with those whose employers did not.

The dominant characteristics of the graduates for whom employers completed questionnaires were:

53% male
37% graduates over 29 years; 30% (20-21 years)
28% graduates of business; 20% (technology); 18% (liberal arts)
62% A.S. recipients

TABLE 1
REPRESENTATIVENESS DATA

Note: This table includes data on: (1) the graduate population who indicated full-time employment in the Alumni Survey, (2) the respondents who furnished employer identification and (3) the graduates whose employers responded by completing the questionnaire. Characteristics of groups 1 and 2 are compared, and of groups 2 and 3. Based on chi-square analysis, levels of significance are denoted thus: * .05 ** .01 ***.001

Characteristics	Graduate Population		Respondents		Graduates Whose Employers Responded	
	No.	V%	No.	V%	No.	V%
Total	746	100.0	217	100.0	177	100.0
Sex						
Female	352	47.2	100	46.1	84	47.5
Male	394	52.8	117	53.9	93	52.5
Age			**		*	
Below 20	12	1.6	2	0.9	0	0.0
20-21	259	34.7	66	30.4	53	29.9
22-24	164	22.0	46	21.2	37	20.9
25-29	104	13.9	24	11.1	21	11.9
Over 29	207	27.7	79	36.4	66	37.3
Program					*	
Liberal Arts	149	20.0	43	19.8	32	18.1
Business	246	33.0	61	28.1	50	28.3
Health Svcs.	78	10.5	27	12.4	26	14.7
Hotel/Food Svcs.	20	2.7	6	2.8	5	2.8
Public Svcs.	66	8.8	30	13.8	27	15.3
Technology	166	22.3	45	20.7	35	19.8
Other and No Data	21	2.8	5	2.3	2	1.1
Degree					*	
Other	21	2.8	5	2.3	2	1.1
Certificate of Achievement	126	16.9	39	18.0	34	19.2
Associate of Science	450	60.3	130	59.9	109	61.6
Associate of Arts	149	20.0	43	19.8	32	18.1
Grade Point Average						
3.5 and above	173	23.2	53	24.4	38	21.5
3.0-3.4	223	29.9	66	30.4	54	30.5
2.0-2.9	263	35.3	65	30.0	56	31.6
Other[a]	87	11.7	33	15.2	29	16.4
Campus			*			
Hawaii Community College	155	20.8	31	14.3	25	14.1
Honolulu Community College	154	20.6	55	25.4	48	27.1
Kapiolani Community College	207	27.7	63	29.0	53	29.9
Kauai Community College	36	4.8	15	6.9	13	7.3
Leeward Community College	147	19.7	40	18.4	28	15.8
Maui Community College	29	3.9	9	4.2	8	4.5
Windward Community College	18	2.4	4	1.8	2	1.1
Occupation			*			
Prof./tech./mgl.	114	15.3	37	17.1	28	15.8
Clerical/sales	250	33.5	55	25.4	45	25.4
Service	201	26.9	76	35.0	65	36.7
Farm, fish., forestry	8	1.1	1	0.5	1	0.6
Processing	3	0.4	2	0.9	2	1.1
Machine trades	61	8.2	17	7.8	13	7.3
Bench work	7	0.9	1	0.5	1	0.6
Structural work	61	8.2	19	8.8	15	8.5
Miscellaneous	13	1.7	2	0.9	1	0.6
No response	28	3.8	7	3.2	6	3.4

TABLE 1 (Cont.)

Characteristic	Graduate Population No.	Graduate Population V%	Respondents No.	Respondents V%	Graduates Whose Employers Responded No.	Graduates Whose Employers Responded V%
Employer						**
Private industry	348	46.6	83	38.3	66	37.3
Tourist industry	56	7.5	14	6.5	12	6.8
State government	74	9.9	26	12.0	24	13.6
City-county government	62	8.3	27	12.4	27	15.3
Non-profit organization	36	4.8	14	6.5	12	6.8
Federal government	63	8.4	21	9.7	11	6.2
Military	40	5.4	13	6.0	9	5.1
Self-employed	24	3.2	8	3.7	7	4.0
Other	8	1.1	1	0.5	1	0.6
No response	35	4.7	10	4.6	8	4.5
Location of Employment				**		
Oahu	500	67.0	152	70.1	122	68.9
Maui	35	4.7	9	4.2	8	4.5
Hawaii	140	18.8	29	13.4	24	13.6
Kauai	38	5.1	16	7.4	14	7.9
Mainland	19	2.5	3	1.4	2	1.1
Foreign or U.S. Possessions	4	0.5	3	1.4	2	1.1
No data	10	1.3	5	2.3	5	2.8
Annual Income				*		
Below $3,000	31	4.2	13	6.0	11	6.2
$3,000-$5,999	130	17.4	39	18.0	32	18.1
$6,000-$7,499	147	19.7	32	14.8	26	14.7
$7,500-$9,999	116	15.5	37	17.1	29	16.4
$10,000-$14,999	114	15.3	43	19.8	37	20.9
$15,000-$19,999	57	7.6	19	8.8	15	8.5
$20,000-$24,999	14	1.9	4	1.8	3	1.7
$30,000 and over	3	0.4	2	0.9	2	1.1
No data	134	17.9	28	12.9	22	12.4
Job/Career Relationship						
Definitely related	223	29.9	74	34.1	61	34.5
Probably related	276	37.0	82	37.8	67	37.9
Probably not related	123	16.5	35	16.1	28	15.8
Definitely not related	55	7.4	13	6.0	10	5.7
No response	69	9.2	13	6.0	11	6.2
Job/Course Relationship				*		
Very relevant	304	40.8	99	45.6	86	48.6
Somewhat relevant	223	29.9	72	33.2	56	31.6
Not very relevant	72	9.7	16	7.4	12	6.8
Not at all relevant	74	9.9	16	7.4	11	6.2
No response	73	9.8	14	6.5	12	6.8

[a]"Other" includes graduates in absentia and those with grade point averages below 2.0.

32% graduates with grade point averages of 2.0-2.9; 31% (3.0-3.4)
30% graduates of Kapiolani; 27% (Honolulu)
37% graduates in service occupations; 25% (clerical/sales)
37% graduates working in private industry; 35% (government)
69% graduates working on Oahu
21% graduates with annual incomes of $10,000-$14,999; 18% ($3,000-$5,999); 16% ($7,500-$9,999)
38% graduates who feel their jobs are probably related to their career plans; 35% (definitely related)
49% graduates who feel their course work is very relevant to their jobs; 32% (somewhat relevant).

D. Findings

1. The Employers

Data on the employment status of graduates were available for 167 employees; 159 (95 percent) were still employed by the companies they identified as employers. *There were no statistically significant differences on this item, by campus, grade point average and occupation.*

a. Size of Companies

There were no statistically significant differences in size of companies, by campus, grade point average and occupation. The data in Table 2 indicate that about 1/3 of the graduates had employers with fewer than 25 employees and the remaining graduates were evenly distributed among employers with 25-100, 101-500 and over 500 employees.

TABLE 2
THE EMPLOYERS: SIZE OF COMPANY

CAMPUS	COUNT / ROW PCT	1 UNDER 25	2 25---100	3 101--500	4 OVER 500	ROW TOTAL
HONOLULU C C	40	12	11	8	15	46
		26.1	23.9	17.4	32.6	26.9
KAPIOLANI C C	41	18	11	11	11	51
		35.3	21.6	21.6	21.6	29.8
LEEWARD C C	42	9	7	7	3	26
		34.6	26.9	26.9	11.5	15.2
KAUAI C C	43	4	2	3	4	13
		30.8	15.4	23.1	30.8	7.6
MAUI C C	44	3	2	2	1	8
		37.5	25.0	25.0	12.5	4.7
HAWAII C C	45	8	6	7	4	25
		32.0	24.0	28.0	16.0	14.6
WINDWARD C C	46	1	0	1	0	2
		50.0	0.0	50.0	0.0	1.2
COLUMN TOTAL		55	39	39	38	171
		32.2	22.8	22.8	22.2	100.0

RAW CHI SQUARE = 9.06986 WITH 18 DEGREES OF FREEDOM. SIGNIFICANCE = 0.9581

b. Number of Community College Graduates Employed by Companies: No data were available for about a third of the graduates (63). There were 50 graduates with employers who had fewer than 4 community college graduates in their employ; 40 with 4-20 and 24 with over 20 community college graduates.[2] (Table 3)

TABLE 3
THE EMPLOYERS: NUMBER OF COMMUNITY COLLEGE GRADUATES IN EMPLOY

CAMPUS	COUNT / ROW PCT	UNKNOWN 1	UNDER 4 2	4 -- 20 3	OVER 20 4	ROW TOTAL
HONOLULU C C	40	18 / 37.5	12 / 25.0	8 / 16.7	10 / 20.8	48 / 27.1
KAPIOLANI C C	41	16 / 30.2	17 / 32.1	16 / 30.2	4 / 7.5	53 / 29.9
LEEWARD C C	42	10 / 35.7	8 / 28.6	7 / 25.0	3 / 10.7	28 / 15.8
KAUAI C C	43	5 / 38.5	4 / 30.8	1 / 7.7	3 / 23.1	13 / 7.3
MAUI C C	44	2 / 25.0	4 / 50.0	2 / 25.0	0 / 0.0	8 / 4.5
HAWAII C C	45	11 / 44.0	4 / 16.0	6 / 24.0	4 / 16.0	25 / 14.1
WINDWARD C C	46	1 / 50.0	1 / 50.0	0 / 0.0	0 / 0.0	2 / 1.1
COLUMN TOTAL		63 / 35.6	50 / 28.2	40 / 22.6	24 / 13.6	177 / 100.0

RAW CHI SQUARE = 14.59585 WITH 18 DEGREES OF FREEDOM. SIGNIFICANCE = 0.6895

2. Evaluations of Community College Preparation

a. Overall Impression

Item 5 in the Employers' Survey asked employers the following question: "Based on your experience with community college graduates, what is your overall impression of the efforts of the community colleges in preparing students for employment? ___0. Insufficient experience ___1. Poor ___2. Satisfactory ___3. Good ___4. Excellent" The results are summarized in Table 4 which shows that the dominant ratings were: good (47 percent) and satisfactory (31 percent).

[2] 24 employers had only one community college graduate. However, 3 graduates worked for employers who had 75 community college graduates; 2 graduates worked for employers with 100; 12 graduates worked for an employer with 225 community college graduates in his employ.

TABLE 4
EMPLOYERS' OVERALL IMPRESSION OF
COMMUNITY COLLEGE PREPARATION

CAMPUS	COUNT / ROW PCT	INSUFFICIENT EXPERIENCE	POOR 1	SATISFACTORY 2	GOOD 3	EXCELLENT 4	ROW TOTAL
HONOLULU C C	40	3	0	18	21	5	47
		6.4	0.0	38.3	44.7	10.6	28.0
KAPIOLANI C C	41	5	1	13	23	9	51
		9.8	2.0	25.5	45.1	17.6	30.4
LEEWARD C C	42	6	0	6	13	0	25
		24.0	0.0	24.0	52.0	0.0	14.9
KAUAI C C	43	0	1	6	6	0	13
		0.0	7.7	46.2	46.2	0.0	7.7
MAUI C C	44	0	0	3	3	1	7
		0.0	0.0	42.9	42.9	14.3	4.2
HAWAII C C	45	3	1	6	11	2	23
		13.0	4.3	26.1	47.8	8.7	13.7
WINDWARD C C	46	0	0	0	2	0	2
		0.0	0.0	0.0	100.0	0.0	1.2
	COLUMN TOTAL	17	3	53	79	17	168
		10.1	1.8	31.0	47.0	10.1	100.0

RAW CHI SQUARE = 24.99593 WITH 24 DEGREES OF FREEDOM. SIGNIFICANCE = 0.4060

There were no statistically significant differences on overall impression, by campus, grade point average, occupation, employer and cooperative education experiences of graduates. There were, however, differences, by job/course relationship and number of community college graduates in the company. Details are given in Table 5 which shows that:

--Over 3/5 of the graduates who considered their course work to be either very relevant or not very relevant to their jobs had employers whose overall impression of community college preparation was "good" or "excellent."

--Close to 90 percent of graduates who worked for companies with over 20 community college graduates had employers whose overall impression was "good."

TABLE 5
EMPLOYERS' OVERALL IMPRESSION OF COMMUNITY COLLEGE PREPARATION,
BY "SIGNIFICANT" CHARACTERISTICS

Characteristic[a]	Total	Insufficient Experience	Poor	Satisfactory	Good	Excellent
Job/Course Relship**	168	10%	2%	31%	47%	10%
No response	12	8%	0%	17%	58%	17%
Very relevant	82	2%	1%	34%	50%	12%
Somewhat relevant	53	17%	2%	28%	49%	4%
Not very relevant	11	9%	0%	27%	36%	27%
Not at all relevant	10	40%	10%	40%	10%	0%
No. of CC Graduates***	168	10%	2%	31%	47%	10%
Unknown	55	20%	0%	35%	35%	11%
Under 4	50	8%	2%	42%	38%	10%
4-20	39	5%	3%	26%	51%	15%
Over 20	24	0%	4%	8%	88%	0%

[a]Based on chi-square analysis, levels of significance denoted thus: * .05 ** .01 *** .001.

b. Preparation of Community College Graduates

There were 18 specific items on which employers rated the community college preparation of graduates as "not applicable," "unsatisfactory," "satisfactory," "good," or "excellent." Results are summarized in Table 6 and details on each item, by campus, are found in Appendix B-1 and, by program, in Appendix B-2.[3]

TABLE 6
EMPLOYERS' EVALUATIONS OF COMMUNITY COLLEGE PREPARATION, BY RATINGS[a]

Knowledge, Skills, Attitudes	Total	Mean Rating	(1) Unsatis-factory	(2) Satis-factory	(3) Good	(4) Excellent
a. Job know-how and technical knowledge	165	2.9	2	51	82	30
b. Application of technical skills and knowledge	163	2.9	1	49	78	35
c. Use of tools, equipment, machines	157	3.0	2	36	77	42
d. Mathematical skills	152	2.8	1	47	82	22
e. Reading	161	2.9	1	44	84	32
f. Writing	162	2.8	1	52	82	27
g. Speaking	166	2.8		56	82	28
h. Judgment; ability to decide, plan, organize	167	2.8	6	59	65	37
i. Creativity; finds new/better ways of doing things	162	2.8	5	61	61	35
j. Positive attitude toward work; commitment	171	3.1	3	38	72	58
k. Cooperativeness; works with others	170	3.1	3	36	65	66
l. Accepts advice and supervision	171	3.1	1	39	72	59
m. Assumes responsibility	170	3.0	3	44	72	51
n. Follows instructions	171	3.1	1	36	82	52
o. Initiative; performs necessary work without being told	171	3.0	6	43	69	53
p. Flexibility; adapts to new work assignments	170	3.0	2	49	72	47
q. Good attendance and punctuality	171	3.3	4	25	65	77
r. Appropriate grooming	169	3.1		36	73	60

[a]Factor analysis was used for its data-reduction capability. Factor 1, which we shall refer to as personal attributes of the graduates, included: judgment, creativity, positive attitude toward work, cooperativeness, accepts advice and supervision, assumes responsibility, follows instructions, and flexibility. 81 percent of the variation was due to this factor.

Factor 2, the basic skills, included mathematical skills, reading, writing and speaking, and 11 percent of the variation was due to this factor.

[3]These ratings were analyzed in terms of total scores for the 171 individuals for whom data were available:

(a)	26	15%	predominantly "excellent"
(b)	14	8%	combination of "excellent" and "good"
(c)	44	26%	predominantly "good"
(d)	16	9%	combination of "good" and "satisfactory"
(e)	20	12%	predominantly "satisfactory"
(f)	35	21%	combination of "excellent", "good", "satisfactory"
(g)	16	9%	at least one "unsatisfactory" rating.

Data in Table 6 show that:

(1) The range in mean ratings is small: 2.8 to 3.3 (or may be viewed as from C+ to B).

(2) The items with the best (3.1 and above) average ratings were:

--positive attitude toward work; commitment
--cooperativeness; works with others
--accepts advice and supervision
--follows instructions
--good attendance and punctuality (3.3)
--appropriate grooming

These items generally received the highest number of "excellent" ratings.

(3) The items with the poorest (2.8) average ratings were:

--mathematical skills
--writing
--speaking
--judgment; ability to decide, plan, organize
--creativity; finds new/better ways of doing things

These items generally received the highest number of "satisfactory" ratings.

We also found that *on all 18 items, there were no statistically significant differences in ratings, by campus and by cooperative education experience of graduates. There were, however, some differences, by grade point average, by occupation and by job/course relationship.* These are shown in Table 7.

Among the major findings in Table 7 are the following:

(1) Grade Point Average

--66% of the graduates were rated "good" (49%) or "excellent" (17%) on their community college preparation regarding speaking. The range receiving these ratings: graduates with grade point averages of 3.5 and above (73%) to those with 3.0-3.4 (60%).

--83% of the graduates were rated "good" (38%) or "excellent" (45%) on their community college preparation regarding attendance and punctuality. The range receiving these ratings: graduates with grade point averages of 3.5 and above (90%) to those with 3.0-3.4 (78%). Over half of the graduates with 3.5 and above (61%) and "other" graduates (55%) were given "excellent" ratings.

TABLE 7
EMPLOYERS' EVALUATIONS OF COMMUNITY COLLEGE PREPARATION,
BY "SIGNIFICANT" CHARACTERISTICS

Characteristic/Item[a]	Total	H% Unsatisfactory	H% Satisfactory	H% Good	H% Excellent
Grade Point Average					
a. Speaking*	166	0%	34%	49%	17%
3.5 and above	37	0%	27%	41%	32%
3.0-3.4	47	0%	40%	49%	11%
2.0-2.9	53	0%	34%	59%	8%
Other	29	0%	31%	45%	24%
b. Attendance and punctuality***	171	2%	15%	38%	45%
3.5 and above	38	0%	11%	29%	61%
3.0-3.4	51	0%	22%	43%	35%
2.0-2.9	53	0%	15%	47%	38%
Other	29	14%	7%	24%	55%
c. Appropriate grooming*	169	0%	21%	43%	36%
3.5 and above	37	0%	11%	35%	54%
3.0-3.4	51	0%	24%	51%	26%
2.0-2.9	52	0%	31%	44%	25%
Other	29	0%	14%	38%	48%
Occupation[b]					
a. Use of tools, equipment, machines*	157	1%	23%	49%	27%
Professional/technical/managerial	22	0%	41%	32%	27%
Clerical/sales	42	0%	14%	48%	38%
Service	58	3%	12%	64%	21%
Machine trades	13	0%	46%	31%	23%
Structural work	13	0%	54%	23%	23%
b. Creativity*	162	3%	38%	38%	22%
Professional/technical/managerial	21	5%	38%	24%	33%
Clerical/sales	42	2%	31%	36%	31%
Service	62	2%	32%	55%	11%
Machine trades	13	8%	39%	46%	8%
Structural work	14	7%	64%	7%	21%
c. Assumes responsibility*	170	2%	26%	42%	30%
Professional/technical/managerial	26	4%	31%	42%	23%
Clerical/sales	44	0%	21%	43%	36%
Service	63	0%	19%	54%	27%
Machine trades	13	0%	46%	15%	39%
Structural work	14	14%	29%	36%	21%
d. Initiative***	171	4%	25%	40%	31%
Professional/technical/managerial	26	4%	39%	35%	23%
Clerical/sales	45	2%	18%	40%	40%
Service	63	0%	18%	52%	30%
Machine trades	13	8%	46%	23%	23%
Structural work	14	14%	43%	21%	21%
Job/Course Relationship[c]					
a. Reading*	161	1%	27%	52%	20%
Very relevant	80	0%	24%	59%	18%
Somewhat relevant	51	0%	35%	39%	26%
Not very relevant	9	0%	22%	56%	22%
Not at all relevant	9	11%	33%	44%	11%
b. Follows instructions**	171	1%	21%	48%	30%
Very relevant	84	0%	20%	49%	31%
Somewhat relevant	55	0%	27%	40%	33%
Not very relevant	10	0%	10%	40%	50%
Not at all relevant	10	10%	80%	70%	0%

[a]Based on chi-square analysis, levels of significance denoted thus: * .05 ** .01 *** .001.

[b]Sum will not equal total because of exclusions: (1) no response (6) and (2) occupations with fewer than 5 graduates: farming, fishery, forestry; processing; bench work and miscellaneous.

[c]Sum will not equal total because "no response" (12) excluded.

--79% of the graduates were rated "good" (43%) or "excellent" (36%) on their community college preparation regarding appropriate grooming. The range receiving these ratings: graduates with grade point averages of 3.5 and above (89%) to those with 2.0-2.9 (69%). About half of the graduates with grade point averages of 3.5 and above (54%) and "other" graduates (48%) had "excellent" ratings.

(2) Occupation

--76% of the graduates were rated "good" (49%) or "excellent" (27%) on their community college preparation regarding use of tools, equipment, machines. The range receiving these ratings: graduates in clerical/sales (86%) and in service occupations (85%) to those in structural work (46%).

--60% of the graduates were rated "good" (38%) or "excellent" (22%) on their community college preparation regarding creativity. The range receiving these ratings: graduates in clerical/sales (67%) and in service occupations (66%) to those in structural work (28%).

--72% of the graduates were rated "good" (42%) or "excellent" (30%) on their community college preparation regarding assuming of responsibilities. The range receiving these ratings: graduates in service occupations (81%) to those in machine trades (54%).

--71% of the graduates were rated "good" (40%) or "excellent" (31%) on their community college preparation regarding initiative. The range receiving these ratings: graduates in service occupations (82%) to those in structural work (42%).

(3) Job/Course Relationship

--72% of the graduates were rated "good" (52%) or "excellent" (20%) on their community college preparation regarding reading. The range receiving these ratings: graduates who felt their course work was not very relevant (78%) and those who felt it was very relevant to their jobs (77%) to those who felt course work was not at all relevant (55%).

--78% of the graduates were rated "good" (48%) or "excellent" (30%) on their community college preparation regarding the following of instructions. The range receiving these ratings: graduates who felt their course work was not very relevant to their jobs (90%) to those who felt that course work was not at all relevant (70%).

3. Employers' Priorities in Community College Education

a. Ratings of Six Items

Employers were asked to rate the importance of six items, and their responses are summarized in Table 8:

(1) Two items were clearly given high priority: (a) positive work attitudes and good work habits and (b) effective human relations.

(2) The item with the lowest mean rating was "broad education."

TABLE 8
EMPLOYERS' PRIORITIES

Item	Total	Mean Rating	Not Important	Somewhat Important	Very Important	Extremely Important
a. Basic skills (reading, writing speaking, mathematics)	175	3.3		10	100	65
b. Specific technical skills of a particular occupation	173	2.8	5	51	84	33
c. General knowledge of a particular occupation	174	2.8	5	53	93	23
d. Broad education	173	2.6	6	79	74	14
e. Positive work attitudes and good work habits	174	3.7			55	119
f. Effective human relations (communicates and works well with others)	173	3.6		5	66	102

There were statistically significant differences in ratings, by campus, on the following two items: "specific technical skills of a particular occupation" and "general knowledge of a particular occupation." Major findings are presented below, and campus tables are included in Appendix B-1:

--68% of the graduates had employers who felt that "specific technical skills of a particular occupation" was somewhat (49%) or extremely (19%) important. The range assigning these ratings: employers of graduates from Hawaii (84%) and from Kauai (83%) to those from Leeward (54%).

--66% of the graduates had employers who felt that "general knowledge of a particular occupation" was somewhat (53%) or extremely (13%) important. The range assigning these ratings: employers of graduates from Honolulu (77%) to those from Leeward (54%).

Although there were no statistically significant differences in ratings of the six items, by grade point average and cooperative education experiences of graduates, there were significant differences, by occupation of graduates, by employers, by number of community college graduates in the company, and by job/course relationship. Details are provided below, based on data in Table 9:

(1) Occupation

--94% of the graduates had employers who considered basic skills as very (57%) or extremely (37%) important. The range receiving these ratings: graduates in professional/technical/managerial occupations (100%) to those in clerical/sales work (91%).

--66% of the graduates had employers who considered general knowledge of a particular occupation as very (53%) or extremely (13%) important. The range receiving these ratings: graduates in service occupations (76%) to those in structural work (50%).

--51% of the graduates had employers who considered broad education as very (43%) or extremely (8%) important. The range receiving these ratings: graduates in service occupations (57%) to those in structural work (31%).

--100% of the graduates had employers who considered positive work attitudes and good work habits as very (32%) or extremely (68%) important. Range of employers who considered this item extremely important: graduates in clerical/sales work (82%) to those in machine trades (46%).

--97% of the graduates had employers who considered effective human relations as very (38%) or extremely (59%) important. The range of employers who considered this item extremely important: graduates in service occupations (70%) to those in professional/technical/managerial work (44%).

(2) Employer

--68% of the graduates had employers who considered specific technical skills of a particular occupation as very or extremely important. The range receiving these ratings: graduates working for non-profit organizations (83%) to those in city-county government or in the military (33%).

(3) Number of Community College Graduates in Company

--68% of the graduates had employers who considered specific technical skills of a particular occupation as very or extremely important. The range receiving these ratings: graduates with employers who had under 4 or 4-20 community college graduates in their employ (76%) to those with over 20 (34%).

TABLE 9
EMPLOYERS' PRIORITIES, BY "SIGNIFICANT" CHARACTERISTICS
(HORIZONTAL PERCENTAGES)

Characteristic/Item[a]	Total	Not Important	Somewhat Important	Very Important	Extremely Important
Occupation[b]					
a. Basic skills**	175	0%	6%	57%	37%
Professional/technical/managerial	27	0%	0%	48%	52%
Clerical/sales	45	0%	9%	42%	49%
Service	65	0%	5%	59%	37%
Machine trades	13	0%	8%	69%	23%
Structural work	14	0%	7%	86%	7%
b. General knowledge of a particular occupation**	174	3%	31%	53%	13%
Professional/technical/managerial	27	7%	37%	44%	11%
Clerical/sales	44	2%	34%	50%	14%
Service	65	0%	25%	59%	17%
Machine trades	13	0%	31%	69%	0%
Structural work	14	7%	43%	43%	7%
c. Broad education***	173	4%	46%	43%	8%
Professional/technical/managerial	27	0%	44%	41%	15%
Clerical/sales	45	4%	40%	47%	9%
Service	65	0%	43%	51%	6%
Machine trades	12	0%	67%	25%	8%
Structural work	13	0%	69%	23%	8%
d. Positive work attitudes and good work habits*	174	0%	0%	32%	68%
Professional/technical/managerial	27	0%	0%	44%	56%
Clerical/sales	44	0%	0%	18%	82%
Service	65	0%	0%	31%	69%
Machine trades	13	0%	0%	54%	46%
Structural work	14	0%	0%	43%	57%
e. Effective human relations***	173	0%	3%	38%	59%
Professional/technical/managerial	27	0%	4%	52%	44%
Clerical/sales	45	0%	2%	40%	58%
Service	64	0%	2%	28%	70%
Machine trades	13	0%	0%	46%	54%
Structural work	13	0%	8%	46%	46%
Employer[c]					
Specific technical skills of a particular occupation**	173	3%	30%	49%	19%
Private industry	65	3%	20%	52%	25%
Tourist industry	11	0%	36%	55%	9%
State government	23	4%	22%	65%	9%
City-county government	27	4%	63%	26%	7%
Federal government	10	10%	20%	50%	20%
Non-profit organization	12	0%	17%	33%	50%
Military	9	0%	67%	33%	0%
Number of CC Graduates in Company					
Specific technical skills of a particular occupation**	173	3%	30%	49%	19%
Unknown	59	3%	27%	54%	15%
Under 4	50	4%	20%	54%	22%
4-20	40	3%	23%	53%	23%
Over 20	24	0%	67%	17%	17%
Job/Course Relationship[d]					
Broad education*	173	4%	46%	43%	8%
Very relevant	83	0%	43%	48%	8%
Somewhat relevant	56	4%	52%	36%	9%
Not very relevant	11	18%	36%	46%	0%
Not at all relevant	11	0%	55%	27%	18%

[a] Based on chi-square analysis, levels of significance denoted thus: * .05 ** .01 *** .001.

[b] Sum will not equal total because of exclusions: (1) no response (6) and (2) occupations with fewer than 5 graduates: farming, fishery, forestry; processing; bench work and miscellaneous.

[c] Sum will not equal total because of exclusions: no response (8), self-employed (7), other (1).

[d] Sum will not equal total because "no response" (12) excluded.

(4) Job/Course Relationship

--51% of the graduates had employers who considered broad education as very (43%) or extremely (8%) important. The range receiving these ratings: graduates who considered their course work very relevant to their jobs (56%) to those who considered course work somewhat relevant or not at all relevant (45%).

b. Most Important Item

Data in Table 10 show that employers considered the following items as the most important item in community college education:

--positive work attitudes and good work habits	37%
--basic skills (reading, writing, speaking, mathematics)	24%
--effective human relations	23%

TABLE 10
EMPLOYERS' SINGLE MOST IMPORTANT ITEM

COUNT / ROW PCT	BASIC SKILLS 1	SPEC TEC SKILLS 2	GEN OCC KNOWL'GE 3	POS WORK ATTITUDE 5	EFF HUM RELAT'NS 6	ROW TOTAL
CAMPUS						
40 HONOLULU C C	18 21.3	4 8.5	2 4.3	17 36.2	14 29.8	47 27.8
41 KAPIOLANI C C	11 20.8	9 17.0	3 5.7	20 37.7	10 18.9	53 31.4
42 LEEWARD C C	10 38.5	1 3.8	0 0.0	10 38.5	5 19.2	26 15.4
43 KAUAI C C	3 27.3	2 18.2	0 0.0	5 45.5	1 9.1	11 6.5
44 MAUI C C	3 37.5	0 0.0	0 0.0	2 25.0	3 37.5	8 4.7
45 HAWAII C C	2 9.1	4 18.2	1 4.5	9 40.9	6 27.3	22 13.0
46 WINDWARD C C	2 100.0	0 0.0	0 0.0	0 0.0	0 0.0	2 1.2
COLUMN TOTAL	41 24.3	27 11.8	6 3.6	63 37.3	39 23.1	169 100.0

RAW CHI SQUARE = 22.97757 WITH 24 DEGREES OF FREEDOM. SIGNIFICANCE = 0.5211

Although there were no statistically significant differences, by campus, there were differences, by occupation, by number of community college graduates in the company, and by job/course relationship. Details are given below, based on data in Table 11:

(1) Occupation

--A plurality of employers with graduates in clerical/sales, service, machine trades and structural work considered positive work attitudes and good work habits as the single most important item in community college education. Those in professional/technical/managerial work had employers who considered basic skills and effective human relations as most important.

(2) Number of Community College Graduates

--A plurality of employers with: (a) under 4 or 4-20 community college graduates in their employ considered positive work attitudes and good work habits as the single most important item; (b) over 20, effective human relations.

(3) Job/Course Relationship

--A plurality of employers with graduates who considered their job/course relationship as: (a) very relevant or not very relevant considered positive work attitudes and good work habits as the single most important item; (b) somewhat relevant, basic skills and positive work attitudes and good work habits; (c) not at all relevant, effective human relations.

TABLE 11
EMPLOYERS' SINGLE MOST IMPORTANT ITEM,
BY "SIGNIFICANT" CHARACTERISTICS
(HORIZONTAL PERCENTAGES)

Characteristic[a]	Total	Basic Skills	Spec. Tech. Skills	Gen. Occup. Knowledge	Broad Education	Work Attitudes and Habits	Human Relations
Occupation[b]	169	24%	12%	4%	0%	37%	23%
Prof./tech./mgl.	25	32%	16%	0%	0%	20%	32%
Clerical/sales	43	26%	7%	0%	0%	49%	16%
Service	63	21%	5%	8%	0%	35%	32%
Machine trades	13	23%	23%	0%	0%	39%	15%
Structural work	14	36%	7%	7%	0%	50%	0%
No. of CC Graduates**							
Unknown	57	33%	11%	4%	0%	33%	19%
Under 4	49	22%	8%	2%	0%	43%	25%
4-20	40	18%	23%	8%	0%	45%	8%
Over 20	23	17%	4%	0%	0%	22%	57%
Job/Course Relationship**[c]							
Very relevant	81	17%	9%	5%	0%	43%	26%
Somewhat relevant	55	36%	7%	2%	0%	35%	20%
Not very relevant	11	27%	18%	9%	0%	46%	0%
Not at all relevant	11	27%	9%	0%	0%	18%	46%

[a] Based on chi-square analysis, levels of significance denoted thus: * .05 ** .01 ***.001.

[b] Sum will not equal total because of exclusions : (1) no response (6) and (2) occupations with fewer than 5 graduates: farming, fishery, forestry; processing; bench work and miscellaneous.

[c] Sum will not equal total because "no response" (12) excluded.

c. Least Important Item

Data in Table 12 show that the item considered least important by the greatest proportion of employers was "broad education" (52 percent). This was followed by "specific technical skills of a particular occupation" (33 percent). *There were no statistically significant differences on this item, by any of the characteristics used to analyze responses.*

TABLE 12
EMPLOYERS' SINGLE LEAST IMPORTANT ITEM

CAMPUS	COUNT / ROW PCT	BASIC SKILLS 1	SPEC TEC SKILLS 2	GEN OCC KNOWL'GE 3	OTH GEN KNOWL'GE 4	POS WORK ATTITUDE 5	EFF HUM RELAT'NS 6	ROW TOTAL
HONOLULU C C	40	0 0.0	20 44.4	2 4.4	22 48.9	1 2.2	0 0.0	45 28.7
KAPIOLANI C C	41	1 2.1	10 21.3	6 12.8	29 61.7	0 0.0	1 2.1	47 29.9
LEEWARD C C	42	0 0.0	10 43.5	4 17.4	9 39.1	0 0.0	0 0.0	23 14.6
KAUAI C C	43	0 0.0	2 22.2	1 11.1	6 66.7	0 0.0	0 0.0	9 5.7
MAUI C C	44	0 0.0	3 42.9	2 28.6	2 28.6	0 0.0	0 0.0	7 4.5
HAWAII C C	45	2 8.3	5 20.8	4 16.7	13 54.2	0 0.0	0 0.0	24 15.3
WINDWARD C C	46	0 0.0	1 50.0	1 50.0	0 0.0	0 0.0	0 0.0	2 1.3
	COLUMN TOTAL	3 1.9	51 32.5	20 12.7	81 51.6	1 0.6	1 0.6	157 100.0

RAW CHI SQUARE = 28.68810 WITH 30 DEGREES OF FREEDOM. SIGNIFICANCE = 0.5393

4. Employers' Comments[4]

About a third of the graduates had employers who wrote comments on various aspects of community college education. These are briefly summarized below, by program. Quotations are verbatim.

a. Liberal Arts (9 employers covering 10 graduates)

Several employers suggested that the colleges should emphasize the basic skills. One employer commented thus:

> Community college graduates are a good source in filling jobs in the sugar industry's trade progression program--mechanics, welders, carpenters, etc. Surprisingly, however, many community college graduates score so poorly in the pre-employment mental tests that it makes me wonder how they ever managed to graduate from high school.
>
> For such students, I would recommend that they be given remedial reading and basic math courses together with their vocational training. . . . I would like to see these community college students leave school with their book work fully completed, so that the companies can concentrate on their on-the-job training.

There were other employers who indicated the importance of (1) effective human relations especially for supervisors, (2) need for "teachers who can get the message across" and (3) the value of on-the-job training to provide students with a "good idea of the job environment."

[4]One employer (financial institution) did not participate in the Employers' Survey because it has a policy of keeping evaluations confidential.

b. Business (14 employers covering 14 graduates)

The three most frequently mentioned areas that need emphasis are: (1) basic skills, (2) human relations and (3) positive work attitudes and good work habits. Some comments are presented below:

> I feel the colleges should really teach the student work skills before letting them out in the work field. Several part-timers . . . did not have the proper work attitude and felt as long as they reported for work, it was O.K. and did the least work required of them or "goofed" it up because they didn't know how though they were supposed to be trained in school. On the job training is possible but the work attitude reflects on how much that person will absorb at work. The person shouldn't have the notion that because they went up to a higher learning, they know it all and refuse to accept on-the-job practiced knowledge, or when corrected or told to accept the company's way as theirs was not acceptable, feel slighted. School and the outside world is different.

> I feel that the greatest area that needs strengthening is the writing and speaking skills. Many of the community college graduates fail to get jobs because of their knowledge in form letter writing and proper speaking ability.

> Hopefully, you're doing these:
> (1) orienting students to importance of being on time and personally neat
> (2) training students so expectations are within their abilities; they should not be in a job requiring 70 wpm when they can do only 45
> (3) stressing importance of good positive attitudes and that they are being of service to people.

A few employers also mentioned the desirability of practical experience and the values of cooperative education. And one was concerned about the need for students to develop "the ability to make decisions--common sense decisions."

One employer was especially complimentary of community college graduates:

> Basically have found that persons hired from community colleges have shown a great desire to perform work to the best of their abilities and knowledge. We feel one of the primary strengths of the community college is the motivation and direction given to the students to prepare them for a specific profession.

c. Health Services (16 employers covering 19 graduates)

A great variety of reactions was found in the comments of these employers:

(1) Dental Assisting: Two employers generally felt that the colleges were doing a good job.

(2) Nursing: One employer felt that there was a need to improve the program by providing more clinical experiences and opportunities for decision making and fostering the development of leadership skills.

(3) Practical Nursing: Five employers expressed varied reactions; three are quoted below:

> Excellent clinical experience for students. Students come well prepared and ready to work--need only a general orientation at time of hire.
>
> My contact with community colleges is minimal. I have experienced working with LPNs who are products of community colleges. I have had good and bad experiences and cannot say the colleges are the cause of the bad ones.
>
> Licensed Practical Nurses are trained adequately for all areas except for medication, and we spend considerable time in preparing LPNs in this area. We are currently reviewing this from the standpoint of our expectations of LPNs and plan to provide additional on the job training and in service on a continuing basis. All new graduates receive a special orientation program upon employment. . . It would assist our planning if /the colleges/ provided a graduating class in January or February so that we may facilitate training on the job for new graduates twice a year.

(4) Medical Lab Technician: One employer considered graduates "to be well trained, knowledgeable and excellent technicians." Another indicated that graduates "should be able to function at the job entry level."

(5) Occupational Therapy: Two employers recognized that the college was providing learning opportunities not available elsewhere. One indicated that the college is doing well and the other pointed to the need for strengthening the image of the college. A third employer indicated the need for counseling and the value of a "less rigid academic atmosphere" as important in the student's transition to a university setting.

(6) Radiologic Technology: One employer indicated a favorable reaction but pointed to the need for follow-up of graduates:

> Their technical part of training seems to be going well. We're judging this by the fact that all students thus far have passed their national registry. . . . Then the big problem are the students who are shy and just not aggressive enough on their own. Most of these students have great potential but because they are not aggressive they seem to stand in the shadows. The school needs to have someone that will do follow-ups on these students to be sure that the clinical instructors at the hospitals are doing their jobs. . .

Another hospital commented thus:

> The Radiologic Technology graduates . . . are considered to be well trained, academically as well as technically, and turn out to be average to above average technologists.
>
> . . . Any decrease in the number of graduates available to us at the end of each year would prove to be a problem in keeping our department fully staffed.
>
> The main suggestions we would have . . . is to change the R. T. students graduation or completion date from August to June or July. This time of the year seems to be when we find our greatest shortage of resources. . . . If the graduation date was earlier, the students could take their boards in May and be hired as registered technologists, with no threat of losing them in the event that they did not pass the registry.

(7) Respiratory Therapy: One employer felt that the graduate had not been well prepared for her work but "because of her interest and positive attitude she was able to overcome this handicap and is now one of the better employees in this department."

Another employer pointed to the need for an accredited program in respiratory therapy for the following reasons: "(a) supply of technicians cannot meet some openings; (b) continuing education for those within the field . . . to meet standards of the profession; (c) future expansion of R. T. disease treatments."

Another hospital also (a) discussed problems in the respiratory therapy program because of the "funding crunch" and lack of accreditation and (b) expressed concern about the demand for respiratory care in Hawaii and the lack of a local supply. "I feel that respiratory care will be seriously jeopardized if the school would close."

d. Hotel/Food Services (3 employers covering 3 graduates)

An especially complimentary reaction was expressed by one employer who hired a hotel/food services graduate as a clerk typist:

> . . . has been our first community college employee and I find her very industrious, pleasant and willing to accept responsibilities. We find her very capable and trustworthy. We are very happy with her work. If she is an example of graduates from the community colleges I can find no faults or complaints. In fact I congratulate you on having such fine people graduating from college.

Two other employers had quite different reactions:

> Since . . . is interested in a future teaching position, he is less committed to his present position, therefore does not perform up to his potential.

> . . . I have found community college graduates vary widely depending on which community college they attended, which particular instructors they had, and on their own individual differences. Based on this I would say that some attempts at standardization should be made. . . . In the area of skills, knowledge and attitudes--why not ask the industry and potential employers what we are looking for? Maybe this survey is an attempt in that direction.

e. Public Services (5 employers covering 6 graduates)

(1) Fire Science: One employer indicated that the college is performing a "very beneficial" task and that instructional methods are good. Another employer suggested that: (a) "instructors might make periodic assessments of the student's progress and keep the student informed of grade standing throughout the semester" and (b) "field or on-the-job observance on equipment in use, special techniques applicable to the occupation and special operational procedures" would be helpful.

(2) Police Science: One employer suggested that there be "more required courses in basic communication skills (writing, speech, English)." Another suggested that more core courses be offered at night.

(3) Paraprofessional Program: The need for more emphasis on writing was expressed by one employer:

> I feel that either in the community college or in the grammar and high schools there has to be more stress on writing skills here in Hawaii. I found that so many professionals, as well as so many non-professionals, are not able to express themselves well on paper and are very poor grammatically.

f. Technology (7 employers covering 7 graduates)

(1) Auto Mechanics: One employer felt that students needed instruction in "common sense" so as to be productive "without wasted motions." Another felt that students should be allowed to take courses in which they are interested, not the "leftovers" if classes are filled.

(2) Aviation Maintenance Technology: One employer said: "We have had great success with our community college students especially within the ranks of our mechanics."

(3) Drafting and Engineering Aide: A comprehensive comment was sent in by an employer:

> Graduates seem to have a poor concept of what is expected of them and what their abilities are. Their assumption is that they are going to be told what are and how to do their assignments, and that their responsibilities are at a subordinate level. They do not appear to have the desire to do a complete and correct job on their own without expecting their supervisors to check and revise any errors or mistakes that they have done.
>
> The following is suggested to better prepare the graduates:
>
> (a) give a broad education in the basics
> (b) continue the co-op program but not as a substitute for class work
> (c) give sufficient and meaningful homework to establish a habit for self-motivation
> (d) bring in supervisors in business as lecturers and/or as speakers for seminars
> (e) provide tours of business establishments
> (f) have students attend trade conferences and seminars
> (g) orient the students to the supervisory level of work as their reason for attending community college, rather than job training
> (h) give the students the different levels in their trades that they can expect to ascend with proper education, training and experience.

(4) Other: An employer of a cosmetology graduate suggested that there be "more practical shop experience." An employer of an engineering technology graduate felt the colleges "should stress effective human relations and good work attitudes." An apparel design graduate was hired as a clerk typist, and her employer felt that college work has helped the student in her "self-image."

E. Summary and Conclusion

1. Summary of Major Findings

a. Return rates for:

(1) graduates furnishing employer identification: 29%

(2) employers completing questionnaires: 79% (covering 82% of the graduates who furnished employer identification)

b. Profile of graduates for whom employers' questionnaires were completed (based on a plurality of responses):

(1) personal characteristics: male, over 29 years of age

(2) academic characteristics: business major, A.S. recipient, grade point average of 2.0-2.9

(3) employment characteristics: worker in service occupations, for private industry, on Oahu, earning annually $10,000-$14,999

(4) other characteristics: job/career plans probably related; job/course work very relevant.

c. Profile of employer, based on plurality of responses: has fewer than 25 employees and doesn't know how many community college graduates he has in his employ.

d. Employers' Evaluations:

(1) Overall impression of community college efforts: "good" (47 percent); "satisfactory" (31 percent).

(2) Factor analysis of the 18 specific items on which employers rated community college preparation of graduates revealed one dominant factor: personal attributes of the graduate (judgment, creativity, positive attitudes toward work, cooperativeness, flexibility, assumes responsibility, accepts advice and supervision, follows instruction).

(3) The preparation of about half of the graduates was rated as predominantly "excellent," predominantly "good" or a combination of "excellent" and "good." However 16 graduates (9 percent) received "unsatisfactory" ratings on at least one aspect of their community college preparation.

(4) The range in mean ratings for the 18 items was small: C+ to B. The better ratings were generally for the personal attributes (except judgment and creativity) of graduates and for their punctuality and grooming. The lower ratings were generally for general occupational knowledge, the basic skills, judgment and creativity.

e. Employers' Priorities:

(1) Top priority in community college education was given to: (a) positive work attitudes and good work habits and (b) effective human relations.

(2) The single most important item was "positive work attitudes and good work habits" (37 percent).

(3) The single least important item was "broad education" (52 percent).

f. Employers' Comments:

Employers expressed varied reactions: some were extremely complimentary of the graduates they had employed; others found serious shortcomings. Employers indicated concern regarding: (1) improvement in the basic skills; (2) development of positive work attitudes and effective human relations; (3) the value of on-the-job experiences; (4) opportunities for decision-making.

Some employers recognized the community colleges as a valuable source of potential employees. For some occupations, the community college is appreciated as the only local source of trained personnel.

2. Concluding Comments

The three purposes of this research effort have been realized: we have received the employers': (a) evaluations of the effectiveness of our programs in preparing graduates for work in terms of their skills, knowledge and attitudes; (b) suggestions for improving our educational programs; (c) priorities regarding skills, knowledge and attitudes in preparing graduates for employment.

We were disappointed by the lower-than-expected rate of return for graduates furnishing employer identification. This may reflect uncertainty, if not insecurity, on the part of our graduates to have their preparation evaluated. One suggestion has been made for the next survey of employers should one be undertaken: send the graduate a copy of the questionnaire and a postpaid return envelope and ask him to give these to his employer. This has the advantage of giving the graduate an opportunity to review the questionnaire. It may also be feasible to request the graduate to complete a similar questionnaire so that his evaluations and priorities can be compared to those of his employer. The approach would require: (a) the employer to furnish the name of his employee and the name of his company; (b) the graduate to notify the researcher of his employer's identification to enable follow-up efforts and a study of representativeness of returns. This approach would be more expensive than the one we used, for many more questionnaires and envelopes would have to be prepared for mailing. If this approach is used, perhaps a stratified random sample of community college graduates might be contacted for assistance. This would reduce the cost to some degree.

The results of this survey should prove helpful to campus and state personnel involved in curriculum planning and evaluation and in student services. Since this statewide effort is the first of its kind for the community colleges, it is hoped that periodic surveys of employers will be undertaken in the future.

Serial No. _____ 1. Position of this employee: _____

2. Is this person still in your employ? ___1. Yes ___2. No

3. Compared with employees you have observed in equivalent positions without the benefit of a community college educati but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	0. Not Applicable	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge		1.	2.	3.	4.
b. Application of technical skills and knowledge		1.	2.	3.	4.
c. Use of tools, equipment, machines		1.	2.	3.	4.
d. Mathematical skills		1.	2.	3.	4.
e. Reading		1.	2.	3.	4.
f. Writing		1.	2.	3.	4.
g. Speaking		1.	2.	3.	4.
h. Judgment; ability to decide, plan, organize		1.	2.	3.	4.
i. Creativity; finds new/better ways of doing things		1.	2.	3.	4.
j. Positive attitude toward work; commitment		1.	2.	3.	4.
k. Cooperativeness; works with others		1.	2.	3.	4.
l. Accepts advice and supervision		1.	2.	3.	4.
m. Assumes responsibility		1.	2.	3.	4.
n. Follows instructions		1.	2.	3.	4.
o. Initiative; performs necessary work without being told		1.	2.	3.	4.
p. Flexibility; adapts to new work assignments		1.	2.	3.	4.
q. Good attendance and punctuality		1.	2.	3.	4.
r. Appropriate grooming		1.	2.	3.	4.

4a. Total number of employees in your company in the State of Hawaii:
___1. Under 25 ___2. 25-100 ___3. 101-500 ___4. Over 500

4b. Estimated number of employees who are graduates of Hawaii's community colleges: _____

5. Based on your experience with community college graduates, what is your overall impression of the efforts of the community colleges in preparing students for employment?

___0. Insufficient experience ___1. Poor ___2. Satisfactory ___3. Good ___4. Excellent

6. Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	1. Not Important	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	1.	2.	3.	4.
b. specific technical skills of a particular occupation	1.	2.	3.	4.
c. general knowledge of a particular occupation	1.	2.	3.	4.
d. broad education	1.	2.	3.	4.
e. positive work attitudes and good work habits	1.	2.	3.	4.
f. effective human relations (communicates and works well with others)	1.	2.	3.	4.

7a. What is the single most important item above? (circle letter) a b c d e f
7b. What is single least important item above? (circle letter) a b c d e f

59

8. We're interested in your thinking about the community colleges in general. What are the colleges doing well? What needs strengthening? Please share your suggestions with us and feel free to continue on the reverse side.

APPENDIX B-1
CAMPUS TABLES

Hawaii Community College

Compared with employees you have observed in equivalent positions without the benefit of a community college education but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	Total	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge	22	1	7	12	2
b. Application of technical skills and knowledge	22	0	10	10	2
c. Use of tools, equipment, machines	20	0	8	7	5
d. Mathematical skills	19	0	7	12	0
e. Reading	19	1	7	11	0
f. Writing	21	1	9	10	1
g. Speaking	22	0	11	10	1
h. Judgment; ability to decide, plan, organize	22	3	9	8	2
i. [illegible]tivity; finds new/better ways of [illegible] things	19	1	11	6	1
j. Positive attitude toward work; commitment	23	0	4	10	9
k. Cooperativeness; works with others	22	0	5	9	8
l. Accepts advice and supervision	23	0	5	9	9
m. Assumes responsibility	23	0	9	12	2
n. Follows instructions	23	0	7	12	4
o. Initiative; performs necessary work without being told	23	1	9	11	2
p. Flexibility; adapts to new work assignments	22	0	8	11	3
q. Good attendance and punctuality	23	0	1	9	13
r. Appropriate grooming	23	0	3	7	13

Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	Total	1. Not Impt.	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	25	0	2	10	13
b. specific technical skills of a particular occupation	25	1	3	12	9
c. general knowledge of a particular occupation	25	0	8	11	6
d. broad education	25	2	13	7	3
e. positive work attitudes and good work habits	25	0	0	6	19
f. effective human relations (communicates and works well with others)	25	0	0	12	13

APPENDIX B-1
CAMPUS TABLES

Honolulu Community College

Compared with employees you have observed in equivalent positions without the benefit of a community college education but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	Total	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge	46	0	19	20	7
b. Application of technical skills and knowledge	46	0	18	23	5
c. Use of tools, equipment, machines	45	0	15	24	6
d. Mathematical skills	44	0	17	24	3
e. Reading	47	0	14	25	8
f. Writing	47	0	16	27	4
g. Speaking	48	0	18	23	7
h. Judgment; ability to decide, plan, organize	47	2	16	20	9
i. Creativity; finds new/better ways of doing things	47	3	18	18	8
j. Positive attitude toward work; commitment	48	1	14	19	14
k. Cooperativeness; works with others	48	1	14	19	14
l. Accepts advice and supervision	48	0	15	19	14
m. Assumes responsibility	48	1	14	18	15
n. Follows instructions	48	0	12	24	12
o. Initiative; performs necessary work without being told	48	2	17	14	15
p. Flexibility; adapts to new work assignments	48	2	14	19	13
q. Good attendance and punctuality	48	3	8	20	17
r. Appropriate grooming	46	0	11	25	10

Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	Total	1. Not Impt.	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	48	0	3	34	11
b. specific technical skills of a particular occupation	48	0	22	19	7
c. general knowledge of a particular occupation	48	0	11	31	6
d. broad education	46	0	19	25	2
e. positive work attitudes and good work habits	48	0	0	17	31
f. effective human relations (communicates and works well with others)	47	0	1	16	30

APPENDIX B-1
CAMPUS TABLES

Kapiolani Community College

Compared with employees you have observed in equivalent positions without the benefit of a community college education but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	Total	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge	52	1	13	26	12
b. Application of technical skills and knowledge	51	1	10	26	14
c. Use of tools, equipment, machines	51	2	8	26	15
d. Mathematical skills	49	0	15	23	11
e. Reading	51	0	11	26	14
f. Writing	49	0	13	22	14
g. Speaking	50	0	10	27	13
h. Judgment; ability to decide, plan, organize	53	0	15	21	17
i. Creativity; finds new/better ways of doing things	52	0	15	21	16
j. Positive attitude toward work; commitment	53	1	10	19	23
k. Cooperativeness; works with others	53	1	6	20	26
l. Accepts advice and supervision	53	1	9	21	22
m. Assumes responsibility	53	1	8	21	23
n. Follows instructions	53	1	7	23	22
o. Initiative; performs necessary work without being told	53	2	6	23	22
p. Flexibility; adapts to new work assignments	53	0	11	22	20
q. Good attendance and punctuality	53	1	9	14	29
r. Appropriate grooming	53	0	9	21	23

Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	Total	1. Not Impt.	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	53	0	3	29	21
b. specific technical skills of a particular occupation	52	0	13	24	15
c. general knowledge of a particular occupation	53	0	17	26	10
d. broad education	53	3	23	24	3
e. positive work attitudes and good work habits	53	0	0	15	38
f. effective human relations (communicates and works well with others)	52	0	2	18	32

APPENDIX B-1
CAMPUS TABLES

Kauai Community College

Compared with employees you have observed in equivalent positions without the benefit of a community college education but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	Total	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge	12	0	4	6	2
b. Application of technical skills and knowledge	12	0	3	3	6
c. Use of tools, equipment, machines	12	0	2	4	6
d. Mathematical skills	12	1	2	6	3
e. Reading	13	0	3	8	2
f. Writing	13	0	5	6	2
g. Speaking	13	0	4	8	1
h. Judgment; ability to decide, plan, organize	11	1	4	4	2
i. Creativity; finds new/better ways of doing things	12	1	2	7	2
j. Positive attitude toward work; commitment	12	0	3	6	3
k. Cooperativeness; works with others	12	0	2	7	3
l. Accepts advice and supervision	12	0	1	7	4
m. Assumes responsibility	12	0	3	7	2
n. Follows instructions	12	0	1	6	5
o. Initiative; performs necessary work without being told	12	0	3	6	3
p. Flexibility; adapts to new work assignments	12	0	2	7	3
q. Good attendance and punctuality	12	0	1	5	6
r. Appropriate grooming	12	0	5	3	4

Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	Total	1. Not Impt.	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	13	0	1	6	6
b. specific technical skills of a particular occupation	12	0	2	9	1
c. general knowledge of a particular occupation	12	1	4	7	0
d. broad education	13	1	9	3	0
e. positive work attitudes and good work habits	13	0	0	7	6
f. effective human relations (communicates and works well with others)	13	0	1	9	3

APPENDIX B-1
CAMPUS TABLES

Leeward Community College

Compared with employees you have observed in equivalent positions without the benefit of a community college education but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	Total	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge	23	0	5	14	4
b. Application of technical skills and knowledge	23	0	6	12	5
c. Use of tools, equipment, machines	22	0	2	14	6
d. Mathematical skills	20	0	5	12	3
e. Reading	23	0	5	12	6
f. Writing	24	0	5	15	4
g. Speaking	24	0	8	12	4
h. Judgment; ability to decide, plan, organize	24	0	10	9	5
i. Creativity; finds new/better ways of doing things	23	0	10	7	6
j. Positive attitude toward work; commitment	25	1	6	12	6
k. Cooperativeness; works with others	25	1	7	6	11
l. Accepts advice and supervision	25	0	7	11	7
m. Assumes responsibility	24	1	8	8	7
n. Follows instructions	25	0	7	11	7
o. Initiative; performs necessary work without being told	25	1	6	10	8
p. Flexibility; adapts to new work assignments	25	0	10	9	6
q. Good attendance and punctuality	25	0	4	13	8
r. Appropriate grooming	25	0	5	13	7

Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	Total	1. Not Impt.	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	26	0	1	14	11
b. specific technical skills of a particular occupation	26	3	9	13	1
c. general knowledge of a particular occupation	26	3	9	13	1
d. broad education	26	0	12	10	4
e. positive work attitudes and good work habits	25	0	0	7	18
f. effective human relations (communicates and works well with others)	26	0	0	9	17

APPENDIX B-1
CAMPUS TABLES

Maui Community College

Compared with employees you have observed in equivalent positions without the benefit of a community college education but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	Total	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge	8	0	3	3	2
b. Application of technical skills and knowledge	7	0	2	3	2
c. Use of tools, equipment, machines	5	0	1	2	2
d. Mathematical skills	6	0	1	4	1
e. Reading	6	0	3	2	1
f. Writing	6	0	3	2	1
g. Speaking	7	0	4	2	1
h. Judgment; ability to decide, plan, organize	8	0	4	3	1
i. Creativity; finds new/better ways of doing things	7	0	4	2	1
j. Positive attitude toward work; commitment	8	0	1	5	2
k. Cooperativeness; works with others	8	0	2	3	3
l. Accepts advice and supervision	8	0	2	4	2
m. Assumes responsibility	8	0	2	5	1
n. Follows instructions	8	0	2	5	1
o. Initiative; performs necessary work without being told	8	0	1	5	2
p. Flexibility; adapts to new work assignments	8	0	3	4	1
q. Good attendance and punctuality	8	0	2	4	2
r. Appropriate grooming	8	0	3	3	2

Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	Total	1. Not Impt.	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	8	0	0	6	2
b. specific technical skills of a particular occupation	8	1	1	6	0
c. general knowledge of a particular occupation	8	1	2	5	0
d. broad education	8	0	2	4	2
e. positive work attitudes and good work habits	8	0	0	3	5
f. effective human relations (communicates and works well with others)	8	0	1	1	6

APPENDIX B-1
CAMPUS TABLES

Windward Community College

Compared with employees you have observed in equivalent positions without the benefit of a community college education but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	Total	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge	2	0	0	1	1
b. Application of technical skills and knowledge	2	0	0	1	1
c. Use of tools, equipment, machines	2	0	0	0	2
d. Mathematical skills	2	0	0	1	1
e. Reading	2	0	1	0	1
f. Writing	2	0	1	0	1
g. Speaking	2	0	1	0	1
h. Judgment; ability to decide, plan, organize	2	0	1	0	1
i. Creativity; finds new/better ways of doing things	2	0	1	0	1
j. Positive attitude toward work; commitment	2	0	0	1	1
k. Cooperativeness; works with others	2	0	0	1	1
l. Accepts advice and supervision	2	0	0	1	1
m. Assumes responsibility	2	0	0	1	1
n. Follows instructions	2	0	0	1	1
o. Initiative; performs necessary work without being told	2	0	1	0	1
p. Flexibility; adapts to new work assignments	2	0	1	0	1
q. Good attendance and punctuality	2	0	0	0	2
r. Appropriate grooming	2	0	0	1	1

Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	Total	1. Not Impt.	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	2	0	0	1	1
b. specific technical skills of a particular occupation	2	0	1	1	0
c. general knowledge of a particular occupation	2	0	2	0	0
d. broad education	2	0	1	1	0
e. positive work attitudes and good work habits	2	0	0	0	2
f. effective human relations (communicates and works well with others)	2	0	0	1	1

APPENDIX B-2
PROGRAM TABLES

Liberal Arts

Compared with employees you have observed in equivalent positions without the benefit of a community college education but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	Total	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge	29	0	6	17	6
b. Application of technical skills and knowledge	29	0	6	13	10
c. Use of tools, equipment, machines	27	0	5	11	11
d. Mathematical skills	26	1	4	13	8
e. Reading	27	0	7	12	8
f. Writing	28	0	8	14	6
g. Speaking	29	0	10	14	5
h. Judgment; ability to decide, plan, organize	30	1	10	11	8
i. Creativity; finds new/better ways of doing things	30	1	9	10	10
j. Positive attitude toward work; commitment	30	1	5	16	8
k. Cooperativeness; works with others	29	1	6	12	10
l. Accepts advice and supervision	30	0	5	15	10
m. Assumes responsibility	30	1	4	15	10
n. Follows instructions	30	0	4	14	12
o. Initiative; performs necessary work without being told	30	1	6	13	10
p. Flexibility; adapts to new work assignments	30	0	7	14	9
q. Good attendance and punctuality	30	0	3	12	15
r. Appropriate grooming	30	0	7	10	13

Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	Total	1. Not Impt.	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	30	0	1	17	12
b. specific technical skills of a particular occupation	29	1	12	14	2
c. general knowledge of a particular occupation	29	2	11	14	2
d. broad education	30	0	17	10	3
e. positive work attitudes and good work habits	30	0	0	12	18
f. effective human relations (communicates and works well with others)	30	0	1	16	13

APPENDIX B-2
PROGRAM TABLES

Business

Compared with employees you have observed in equivalent positions without the benefit of a community college education but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	Total	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge	48	0	17	21	10
b. Application of technical skills and knowledge	47	0	16	18	13
c. Use of tools, equipment, machines	45	0	8	23	14
d. Mathematical skills	46	0	12	27	7
e. Reading	47	0	14	23	10
f. Writing	46	0	18	19	9
g. Speaking	46	0	17	18	11
h. Judgment; ability to decide, plan, organize	48	0	20	15	13
i. Creativity; finds new/better ways of doing things	45	0	17	16	12
j. Positive attitude toward work; commitment	50	1	10	21	18
k. Cooperativeness; works with others	50	1	8	20	21
l. Accepts advice and supervision	50	1	10	22	17
m. Assumes responsibility	49	1	13	21	14
n. Follows instructions	50	1	8	28	13
o. Initiative; performs necessary work without being told	50	2	10	21	17
p. Flexibility; adapts to new work assignments	50	0	13	21	16
q. Good attendance and punctuality	50	1	7	22	20
r. Appropriate grooming	50	0	11	23	16

Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	Total	1. Not Impt.	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	50	0	4	26	20
b. specific technical skills of a particular occupation	49	2	12	29	6
c. general knowledge of a particular occupation	50	1	23	23	3
d. broad education	50	4	20	23	3
e. positive work attitudes and good work habits	49	0	0	13	36
f. effective human relations (communicates and works well with others)	50	0	1	20	29

APPENDIX B-2
PROGRAM TABLES

Health Services

Compared with employees you have observed in equivalent positions without the benefit of a community college education but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	Total	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge	25	1	6	13	5
b. Application of technical skills and knowledge	25	1	6	14	4
c. Use of tools, equipment, machines	24	1	6	13	4
d. Mathematical skills	21	0	9	9	3
e. Reading	23	0	6	13	4
f. Writing	24	0	6	13	5
g. Speaking	24	0	6	16	2
h. Judgment; ability to decide, plan, organize	25	2	7	12	4
i. Creativity; finds new/better ways of doing things	22	0	9	10	3
j. Positive attitude toward work; commitment	25	0	5	11	9
k. Cooperativeness; works with others	25	0	5	10	10
l. Accepts advice and supervision	25	0	7	7	11
m. Assumes responsibility	25	0	8	10	7
n. Follows instructions	25	0	7	10	8
o. Initiative; performs necessary work without being told	25	0	7	11	7
p. Flexibility; adapts to new work assignments	24	0	9	9	6
q. Good attendance and punctuality	25	0	6	8	11
r. Appropriate grooming	25	0	6	10	9

Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	Total	1. Not Impt.	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	26	0	1	13	12
b. specific technical skills of a particular occupation	26	0	2	13	11
c. general knowledge of a particular occupation	26	0	3	14	9
d. broad education	26	0	13	12	1
e. positive work attitudes and good work habits	26	0	0	7	19
f. effective human relations (communicates and works well with others)	25	0	1	7	17

APPENDIX B-2
PROGRAM TABLES

Public Services

Compared with employees you have observed in equivalent positions without the benefit of a community college education but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	Total	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge	26	0	6	18	2
b. Application of technical skills and knowledge	25	0	6	16	3
c. Use of tools, equipment, machines	23	0	3	17	3
d. Mathematical skills	22	0	4	17	1
e. Reading	26	0	4	19	3
f. Writing	27	0	6	19	2
g. Speaking	24	0	6	18	3
h. Judgment; ability to decide, plan, organize	26	0	6	15	5
i. Creativity; finds new/better ways of doing things	26	0	8	15	3
j. Positive attitude toward work; commitment	26	0	4	14	8
k. Cooperativeness; works with others	26	0	5	15	6
l. Accepts advice and supervision	26	0	7	12	7
m. Assumes responsibility	26	0	5	15	6
n. Follows instructions	26	0	4	15	7
o. Initiative; performs necessary work without being told	26	0	4	14	8
p. Flexibility; adapts to new work assignments	26	0	4	14	8
q. Good attendance and punctuality	26	1	3	13	9
r. Appropriate grooming	26	0	2	16	8

Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	Total	1. Not Impt.	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	27	0	2	16	9
b. specific technical skills of a particular occupation	27	1	14	10	2
c. general knowledge of a particular occupation	27	1	6	19	1
d. broad education	27	1	7	18	1
e. positive work attitudes and good work habits	27	0	0	7	20
f. effective human relations (communicates and works well with others)	27	0	1	6	20

APPENDIX B-2
PROGRAM TABLES

Technology

Compared with employees you have observed in equivalent positions without the benefit of a community college education but with similar years of experience, the preparation of this graduate is (check appropriate block):

Knowledge, Skills, Attitudes	Total	1. Unsatis-factory	2. Satis-factory	3. Good	4. Excellent
a. Job know-how and technical knowledge	30	1	14	10	5
b. Application of technical skills and knowledge	30	0	14	13	3
c. Use of tools, equipment, machines	31	0	13	11	7
d. Mathematical skills	31	0	16	13	2
e. Reading	31	1	12	12	6
f. Writing	31	1	13	14	3
g. Speaking	33	0	17	11	5
h. Judgment; ability to decide, plan, organize	31	3	15	8	5
i. Creativity; finds new/better ways of doing things	32	4	16	7	5
j. Positive attitude toward work; commitment	33	1	13	7	12
k. Cooperativeness; works with others	33	1	12	6	14
l. Accepts advice and supervision	33	0	9	14	10
m. Assumes responsibility	33	1	14	8	10
n. Follows instructions	33	0	13	13	7
o. Initiative; performs necessary work without being told	33	3	16	6	8
p. Flexibility; adapts to new work assignments	33	2	14	11	6
q. Good attendance and punctuality	33	2	5	10	16
r. Appropriate grooming	31	0	9	12	10

Please indicate how important it is for the community college graduate to have each of the following before entering the world of work. (check appropriate block)

Item	Total	1. Not Impt.	2. Somewhat Important	3. Very Important	4. Extremely Important
a. basic skills (reading, writing, speaking, mathematics)	35	0	2	23	10
b. specific technical skills of a particular occupation	35	1	9	15	10
c. general knowledge of a particular occupation	35	1	9	19	6
d. broad education	33	1	18	9	5
e. positive work attitudes and good work habits	35	0	0	16	19
f. effective human relations (communicates and works well with others)	34	0	1	16	17

APPENDIX C

Employer Surveys in Other States

Report No. 14 of the Student Flow Project indicated that a number of employer surveys were identified and analyzed to assist in the development of Hawaii's study. While that report concentrated on the type of questions included in such surveys, this Appendix presents a very brief summary of the results of studies conducted by six community colleges and two agencies having statewide responsibility for vocational/technical education.

A. Return Rates

1. Returns from Graduates Supplying Employers' Names and Addresses

Montgomery Community College in Maryland has administered employers' surveys for several years and relies on graduates to furnish the names and addresses of their employers. Although 199 (out of the 280 graduates of career curricula) furnished names, only 96 (34 percent) of the employed career graduates gave permission for their employers to be contacted. In the previous year, 44 percent gave such permission.

Other colleges used different approaches in obtaining the names of employers: Moraine Valley Community College used a combination of information from graduates and from program coordinators. Miami-Dade Community College had an elaborate system, including assistance from Florida's Department of Commerce in locating employers of career education students and assuming "implied consent" to contact employers of students who did not respond to a questionnaire by a specified date.

2. Returns from Employers

In many instances, community colleges sent questionnaires only to employers of career graduates. Those have an asterisk in the listing of return rates. It should be noted, however, that graduates who are employed immediately after graduation oftentimes were enrolled in career curricula.

		No. of Resp.	Return Rate
Florida.	Miami-Dade CC* (non-graduates included)	569	40%
Illinois.	Moraine Valley Community College*	85	76%
Maryland.	Montgomery Community College*	77	80%
Minnesota.	Minnesota University Technical College*	288	72%
Missouri.	Maple Woods Community College*	86	82%
Oregon.	Portland Community College	241	80%

Other approaches were used by boards having statewide responsibility for vocational/technical education:

--South Carolina Advisory Council on Vocational and Technical Education polled 10,000 of that state's largest employers and had a return of 12 percent.

--Utah State Advisory Council for Vocational and Technical Education polled a representative sample (989) of that state's employers and had a return of 30 percent.

In general, the efforts of individual colleges had much higher returns than statewide undertakings. There may be several reasons for this: Some colleges have annually conducted employer surveys, so employers in their geographic area may be more prone to participate because of their familiarity with the undertaking. The surveys conducted by colleges usually seek feedback based on experiences with specific students or graduates, in contrast to statewide efforts dealing with vocational/technical education in general. It may also be easier to feel anonymity in a statewide survey.

B. Findings from Community College Surveys

1. Evaluations of Community College Education and Graduates

a. Florida. Miami-Dade Community College

The following percentages of employers rated the career education students as "excellent" or "good":

79% depth of knowledge required by job
78% understanding of theory behind tasks performed
75% performance of job skills from beginning of employment
78% familiarity with equipment
77% range of knowledge required by job
82% ability to communicate with others
86% ability to get along with co-workers

b. Illinois. Moraine Valley Community College

Composite mean score values for technical skills, human relations, communication skills and problem solving were between "good" and "excellent," but below the midpoint in this range.

c. Maryland. Montgomery Community College

52% of the employers indicated they would hire graduates without reservation in the same area of their current employees. The proportions of employers who indicated a rating of "more than adequate" (best rating in questionnaire) are given below, by item:

39% depth of knowledge required by the job
45% scope of knowledge required by the job
41% understanding theory behind the tasks
41% performance of job skills from beginning of employment
35% familiarity with equipment and machines
52% ability to communicate with supervisors
56% ability to get along with fellow workers
59% overall work attitude

12% of the employers indicated an associate degree was part of the requirements for the job.

59% of the employers do not show a preference for associate degree recipients in hiring.

42% felt that the promotion potential of employees was usually enhanced by an associate degree.

d. Minnesota. Minnesota University Technical College

Approximately 99% of the employers would hire other MUTC graduates. Graduates compared favorably with other employees--64% were rated superior or above average and 32%, average, in quality of work. Other ratings on quantity of work and basic skills were also favorable. Employers rated the college highly in preparing graduates for jobs (19%, excellent; 58%, good).

e. Missouri. Maple Woods Community College

In terms of general job requirements, 84% of the employers rated the preparation of the graduates as "excellent" or "good"; on skill performance, 81%; on attitude toward work, 97%.

f. Oregon. Portland Community College

93% of the employers indicated that graduates were successful in their positions, and 73% felt that the graduates were better prepared for their jobs than the average new employee without such college work. 70% indicated that educational training helped graduates to a considerable extent to do their jobs. 72% felt that graduates had an advantage in promotion or upgrading considerations.

2. Additional Analyses

Moraine Valley Community College: A 25-item questionnaire was designed to evaluate three types of skills: technical, human relations and problem solving. However, factor analysis revealed that employers used a two-dimensional structure: technical and human relations skills. (56% of the variance was accounted for by these two factors.) That study dealt with employers of 1969-71 career graduates.

Moraine Valley Community College: Correlations between grade point average and mean scores on the following items were found to be statistically significant: problem solving skills (.19), quality of work (.19) and quantity of work (.26).

C. Findings from Statewide Surveys

1. South Carolina Advisory Council on Vocational and Technical Education

The following quotation from the report summarizes the highlights:

> Those who responded to the survey were very supportive of technical education and of vocational education. Over 9 of 10 persons indicated they believed vocational and/or technical education to be a good source of trained manpower. With over half of the respondents having had experience with graduates of the programs as employees, 84 percent thought the vocational/technical graduates were as capable or more capable than other employees, with over 50 percent ranking them more capable. The respondents thought the technical colleges/centers were meeting the needs of business and industry (74%) and also meeting the needs of the students (90%). . . . (p. v)

2. Utah State Advisory Council for Vocational and Technical Education

The following conclusions were reached:

> It would appear that the vocational education system, while qualitatively doing a good job, is not meeting Utah's employer needs for trained people. Statewide . . . there were over 800 jobs in the vocational area which went unfilled due to the lack of qualified applicants. . . . Thus, it would seem that Utah's employers want more vocationally prepared applicants than are currently available. Also, it would seem they will continue to want more vocationally trained applicants in the next one to three years. The quality of this training will also be of vital concern. Employers stress the need to emphasize areas such as skills improvement, on-the-job experience, attitude, appearance, personality and work habits.
>
> The unfamiliarity of employers with area vocational programs is a serious problem. Only 27 percent of the responding firms rated themselves as having either considerable or high familiarity with programs in their areas. . . . In recruiting employees, none of the industry groups listed the vocational schools as a primary source. (p. v)

D. References

Florida. Miami-Dade Community College. An Employment Study of Miami-Dade Community College 1972-1973 Career Education Students and Their Employers (June 1975).

Illinois. Moraine Valley Community College. Employer Evaluation of 1973-74 Occupational Graduates (September 1975).

Maryland. Montgomery Community College. The Employers II; A Survey of Employers Who Have Hired Career Program Graduates (1975).

Minnesota. Minnesota University Technical College. Follow-up and Evaluation of Graduates /and/ Employer Evaluation of Graduates in Minnesota Collegiate-Technical Education (n.d.)

Missouri. Maple Woods Community College. Follow-up of Maple Woods Community College Occupational Graduates, 1970-1974 (March 1975).

Oregon. Portland Community College. Status of Spring 1971 Graduates (September 1972).

South Carolina Advisory Council on Vocational and Technical Education. The Adequacy of Vocational and Technical Education (February 1976).

Utah State Advisory Council for Vocational and Technical Education. Are Employer Needs Being Met? A Report: Vocational Education-Employer Needs Survey (February 1976).